

LDWSF 12.3 298.1 v.4
08/08/08

MATERIAL SAFETY DATA SHEET

HAZARD RATINGS HMIS

Health 2
Flammability 4
Reactivity 0
PPE X



1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product K008724
MSDS Name SUPER-TAK AEROSOL ADHESIVE
CAS # Mixture
Generic Description Aerosol Spray Flammable
Manufacturer BOSTIK FINDLEY, INC.
211 Boston Street
Middleton, MA 01949 USA

24 Hour Emergency Assistance

Phone: 1-800-227-0332

General Assistance

Phone: 1-978-777-0100

MSDS Assistance

Phone: 1-978-777-0100

2 COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Percentage
Hexane	110-54-3	15 - 40
ACETONE	67-64-1	10 - 30
Propane	74-98-6	7 - 13
Isobutane	75-28-5	7 - 13
DIMETHYL ETHER	115-10-6	3 - 7
Non-hazardous and other ingredients below reportable levels	Proprietary	Balance

USEPA SF



1337364

3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Product is a flammable aerosol. Pressurized container may explode when exposed to heat or flame. Contact may cause skin and eye irritation. Mist may cause nose and throat irritation. Ingestion may cause nausea, vomiting, pain, upset stomach, and diarrhea.

POTENTIAL HEALTH EFFECTS

SKIN CONTACT: This product may cause irritation to the skin. Prolonged or repeated contact with this product may dry and/or defat the skin. This product may be harmful if it is absorbed through the skin.

EYE CONTACT: Liquid or vapors may irritate the eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Eye contact may lead to permanent damage if not treated promptly.

INHALATION: This product may cause irritation to the respiratory system. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination. Possibly unconsciousness and asphyxiation.

INGESTION: This product is harmful if swallowed. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

MSDS Number	14983	Product	K008724
Label Number	14983	NA = Not Available	ND = Not Determined

TARGET ORGANS

Central Nervous System. Lungs. Skin. Eyes.

4 FIRST AID MEASURES

SKIN

For skin contact, wash immediately with soap and water. If irritation persists, get medical attention.

EYE

Immediately flush with plenty of water for at least 15 minutes, holding eyelids open at all times. Get medical attention immediately.

INHALATION

Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration. Call a physician if symptoms develop or persist.

INGESTION

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. If person is conscious and can swallow, immediately give two glasses of water, but do not induce vomiting. Material is corrosive. If vomiting occurs, give fluids again. Seek immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

NOTES TO PHYSICIAN

This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately. If overexposure to the solvents in this product is suspected, testing should include nervous system and brain effects including recent memory, mood, concentration, headaches and altered sleep patterns. Liver and kidney function should be evaluated.

5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools; this may result in frothing and increase fire intensity.

BASIC FIRE FIGHTING PROCEDURES

DANGEROUS when exposed to heat or flame. This material can be ignited by flame or spark under all normal atmospheric conditions. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Pressurized Container: May explode when exposed to heat or flame. Empty containers may retain product residue including Flammable or Explosive vapors. Do not cut, drill, grind, or weld near full, partially full, or empty product containers.

DUST EXPLOSION HAZARD

None Known

SENSITIVITY TO MECHANICAL IMPACT

Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

SENSITIVITY TO STATIC DISCHARGE

Sparks generated by static discharge may ignite this product or its vapors. All containers and equipment must be bonded or grounded to minimize risk.

UNUSUAL FIRE & EXPLOSION HAZARDS

During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a buildup of internal pressures. Cool with water.

FIRE FIGHTING EQUIPMENT/INSTRUCTIONS

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Flash Point -156 F (-104 C)

6 ACCIDENTAL RELEASE MEASURES

EMERGENCY ACTION

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. Keep upwind of the spilled material and isolate exposure. Wear appropriate protective equipment and clothing during clean-up.

CONTAINMENT

Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Cover spills with non-flammable absorbent and place in closed chemical waste containers.

7 HANDLING & STORAGE

For Commercial Use Only - Not Packaged or Labeled for Home Use!

HANDLING

Keep this product from heat, sparks, or open flame. Avoid getting this material into contact with your skin and eyes. Avoid breathing mists or aerosols of this product. Use this product with adequate ventilation. Do not reuse the empty container.

STORAGE

Store in a cool, dry, well-ventilated area. Do not handle or store near an open flame, heat or other sources of ignition. Keep out of direct sunlight. Do not store above 120 F (49 C).

EMPTY CONTAINER PRECAUTION

Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended exposure limits. Explosion proof exhaust ventilation should be used.

EYE PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

Wear goggles or safety glasses with side shields.

SKIN PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

Impervious gloves should be used at all times when handling this product. Recommended gloves include rubber, neoprene, nitrile or viton. Use of protective coveralls and long sleeves is recommended.

RESPIRATORY PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

Avoid breathing vapor and/or mists. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator.

GENERAL

Eyewash fountains and emergency showers should be readily available. Use good industrial hygiene practices in handling this material.

EXPOSURE LIMITS

ACGIH 2000 - Time Weighted Averages

ACETONE	67-64-1	500 ppm TWA
HEXANE	110-54-3	50 ppm TWA
PROPANE	74-98-6	2500 ppm TWA

OSHA - Vacated PELs - Time Weighted Averages

ACETONE	67-64-1	750 ppm TWA; 1800 mg/m3 TWA
HEXANE	110-54-3	50 ppm TWA; 180 mg/m3 TWA
PROPANE	74-98-6	1000 ppm TWA; 1800 mg/m3 TWA

9 PHYSICAL & CHEMICAL PROPERTIES

Vapor Pressure	2203 mmHg at 21 Deg C
Target Solids	12 %
pH	N/A
Density	0.72 g/cc
Odor Threshold	N/A
Octanol/Water Coefficient	N/A
Odor	Solvent
Color	Cream
Physical State	Aerosol
Freeze Protect	No

10 STABILITY & REACTIVITY

STABILITY/INCOMPATIBILITY

Stable under normal conditions.

HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

Upon decomposition of this product, the following oxides will be produced: Carbon dioxide, carbon monoxide, oxides of sulfur and nitrogen.

HAZARDOUS POLYMERIZATION

Will not occur.

CONDITIONS TO AVOID

Keep away from sources of ignition. Avoid contact with Strong Oxidizers, Reducers, Acids and Alkalis.

11 TOXICOLOGICAL INFORMATION

LD50

NIOSH - Selected LD50s and LC50s

ACETONE	67-64-1	Inhalation LC50 Rat : 50100 mg/m3/8H; Inhalation LC50 Mouse : 44 gm/m3/4H; Oral LD50 Rat : 5800 mg/kg; Oral LD50 Mouse : 3 gm/kg
DIMETHYL ETHER	115-10-6	Inhalation LC50 Rat : 308 gm/m3
HEXANE	110-54-3	Inhalation LC50 Rat : 48000 ppm/4H; Oral LD50 Rat : 28710 mg/kg
ISOBUTANE (CONTAINING >= 0.1% BUTADIENE (203-450-8))	75-28-5	Inhalation LC50 Rat : 57 pph/15M

CARCINOGENICITY

This product itself is not a listed carcinogen by OSHA, IARC or NTP.

12 ECOLOGICAL INFORMATION

VOC (Volatile Organic Compounds) 459 g/l (3.83 lb/gal)

ECOTOXICOLOGICAL INFORMATION

Organic solvents produce slight to moderate toxicity to aquatic life. Insufficient data exists to evaluate the effect on plants, birds or land animals.

13 DISPOSAL CONSIDERATIONS

We make no guarantee or warranty of any kind that the use or disposal of this product complies with all local, state, or federal laws. It is also the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable statutes.

WASTE DISPOSAL

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

14 TRANSPORT INFORMATION

COMMENTS

This product is regulated under ICAO for International Air Transport and IMDG for Ocean Transport as an Aerosol, Class 2.1, UN1950.

Proper Shipping Name	Consumer Commodity
UN/NA Code	ORM-D

15 REGULATORY INFORMATION

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

FEDERAL REGULATIONS

All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA - Hazardous Substances and their Reportable Quantities

ACETONE	67-64-1	final RQ = 100 pounds (45.4 kg)
HEXANE	110-54-3	final RQ = 5000 pounds (2270 kg)

Based on an evaluation of the components used, this product does contain hazardous ingredients identified as per 29 CFR 1910.1200.

STATE REGULATIONS

If this product contains any ingredients listed under California Proposition 65, they will be noted below:

INTERNATIONAL REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.

This is a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS). Class D Division 2 Sub-division B. Class B Division 5. and Class A.

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES

Not Regulated

SARA 311/312 HAZARD CATEGORIES

Immediate Hazard	Yes
Delayed Hazard	No
Fire Hazard	Yes
Pressure Hazard	Yes
Reactivity Hazard	No

SARA 313 TOXIC CHEMICALS

Component	CAS Number	Percentage
Hexane	110-54-3	15 - 40

WHMIS RATINGS

Compressed Gas	X	Flammable/Combustible	X	Oxidizer	Acutely Toxic
Other Toxic Effects	X	Bio Hazardous		Corrosive	Dangerously Reactive

16 OTHER INFORMATION

DISCLAIMER

The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik Findley, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Issue Date	21-Feb-2002	Supersedes	New
Prepared By	Russell Hardenber		

MSDS Number	14983	Product	K008724
Label Number	14983	NA = Not Available	ND = Not Determined

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Part (

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Material Safety Data Sheet POR-15, Inc. PO Box 1235, Morristown, NJ 07962-1235
Emergency telephone numbers: Chemtrec 800-424-9300, 973-887-1999, 800-457-6715, 973-539-3236

PRODUCT NAME: POR-15 Rust Preventive Paint
CHEMICAL NAME: Isocyanate Prepolymer based on MDI
CHEMICAL FAMILY: Solution Aromatic Isocyanates (26447-40-5)

FORMULA: Mixture
T.S.C.A. STATUS: OK
TRADE NAMES/SYNONYMS: POR-15 Rust Paint, POR-15 Paint

II. HAZARDOUS INGREDIENTS

Diphenylmethane Diisocyanate(MDI)(26447-40-5)%:ca 20
Naphtha Petroleum (68333-23-3)

Current TLV: ACGIH: 0.005ppm(0.2 mg/m³)
Ceiling value OSHA (PEL): Same

III. PHYSICAL DATA

BOILING POINT: 232 Degrees F
VAPOR PRESSURE: 38mm Hg
VAPOR DENSITY: (Air = 1) 4.5
SOLUBILITY IN WATER: Nil
ODOR: Aromatic LBS. PER GALLON: 8.9
VISCOSITY: Range @ 77° F/25°C: 200-500 CPS

SPECIFIC GRAVITY: (Water = 1) 1.6
% VOLATILE BY VOLUME: 26%
EVAPORATION RATE (Ether = 1): For solvent, 4.5
COLOR: Black, Silver, Clear (light brown trans)
VOLATILE ORGANICS: For POR-15 Clear - 236 grams per liter
For POR-15 Silver & Black - 223 grams per liter

IV. FIRE & EXPLOSION HAZARD DATA

FLASH POINT (Method used): TCC 104 Degrees F
EXTINGUISHING MEDIA: Dry chemical (e.g. monoammonium phosphate, potassium sulfate, and potassium chloride, carbon dioxide, high expansion (proteninic) chemical foam, water spray for large fires.
SPECIAL FIRE FIGHTING PROCEDURES/USUAL FIRE OR EXPLOSION HAZARDS: Full emergency equipment with self-contained breathing apparatus should be worn by firefighters. During a fire, MDI vapors and other irritating, toxic gases may be generated by thermal decomposition (see section VIII). At temperatures greater than 400 degrees F (204 degrees C), polymeric MDI can polymerize and decompose. Use cold water to cool fire-exposed containers.
HAZARD CLASS: B HEALTH: 3 FIRE: 2 REACTIVITY: 1 FLAMMABLE LIMITS LEL: 1% FLAMMABLE LIMITS UEL: 7.1%

V. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: For isocyanates, 0.02ppm; for solvent, 200ppm
EFFECTS OF OVEREXPOSURE: Eyes-severe irritation; tearing skin, discoloration-drying; breathing-irritation, dizziness, unconsciousness (for solvent). For isocyanates, coughing, irritation of mucous membranes and respiratory tract.
SKIN EFFECTS: Slight to moderate irritation(MDI); skin sensitizer in guinea pigs(MDI). No conclusive evidence has been developed to indicate that MDI or POR-15 is carcinogenic, teratogenic or that either one causes reproductive effects in animals or humans. MDI has been reported by NIOSH to be mutagenic to Salmonella Typhimurium bacteria in the presence of a mammalian liver activation system. There is not full agreement in the scientific community on the significance of these Ames test results and their relationship to human safety in assessing the risk of cancer in man. A commitment has been made to perform an animal life-time inhalation study on polymeric MDI.
HUMAN EFFECTS OF OVEREXPOSURE: INHALATION-Inhalation of MDI vapors or aerosols in concentrations above 0.02ppm can produce irritation of the mucous membranes in the respiratory tract, running nose, sore throat, productive cough and a reduction of lung function. Extensive exposures to concentrations well above the TLV could lead to bronchitis, bronchial spasm and pulmonary edema. These effects are usually reversible. However, due to low volatility, high exposures are not anticipated except if the material is overheated or sprayed as an aerosol into the air. Hypersensitivity pneumonitis has also been reported. Another type of response is hyperreactivity or hypersensitization. Persons with a preexisting unspecific bronchial hyperreactivity or persons with a specific isocyanate hypersensitivity (as a result of previous repeated overexposure or a single large dosage) will respond to small isocyanate concentrations at levels well below the TLV of 0.02ppm. Symptoms could be immediate or delayed and include chest tightness, respiratory distress or asthmatic attack. SKIN: Polymeric MDI reacts with skin protein and tissue moisture and can cause localized irritation as well as discoloration. Prolonged contact could produce reddening, swelling, or blistering and, in some individuals, skin sensitization resulting in dermatitis. EYES: Liquid, vapors, or aerosols are irritating to the eyes and can cause lachrymation (tearing effect). Corneal damage can occur; however, indications are that the damage is reversible and does not result in permanent injury. INGESTION: Ingestion could result in irritation and some corrosive action in the

VI. EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: Flush with clean, lukewarm water(low pressure) for at least 15 min., occasionally lifting eyelids; obtain medical attention.
SKIN CONTACT: Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Wash contaminated clothing thoroughly before re-use.
INHALATION: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic.
INGESTION: Do not induce vomiting. Give 250 ml of milk or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult physician.

VII. PROTECTION RECOMMENDATIONS

EYE PROTECTION: Safety glasses with side shields, splash goggles or face shield. Contact lenses should not be worn. SKIN PROTECTION: Chemical-resistant gloves. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered to a minimum. RESPIRATORY PROTECTION: Use respirator that is recommended or approved for use in isocyanate containing environments (air purifying or fresh air supplied). Consider type of application and environmental concentrations. In spray applications you must protect against exposure to both vapor and spray mist. An air-supplied respirator is strongly recommended for spray application. Observe OSHA regulations for respirator use 29 CFR, 1910.134. VENTILATION: Ventilation as required to maintain air concentrations below TLV's. If material is spray-applied, ventilation should be provided and air supplied respirators worn. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

VIII. REACTIVITY DATA

STABILITY: Stable under normal conditions. POLYMERIZATION: Will not occur in unopened cans under normal conditions. CONDITIONS TO AVOID: Temperatures below 32 degrees F (0°C) or above 122 degrees F (50 degrees C). To maintain freshness: Avoid contact with water, alcohols, amines, strong bases, metal compounds or surface active materials. HAZARDOUS DECOMPOSITION(typical of all paints): By fire, carbon dioxide, CO, oxides of nitrogen, traces of HCN, MDI, and elements unknown.

IX. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate source of ignition of vapors, wear protective clothing while cleaning up; absorb on sand, clay, or absorbent material. WASTE DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Incineration is preferred. Decontaminate empty containers.

X. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH/MSHA approved respirator. EYE PROTECTION: Goggles or face mask. VENTILATION: Use in well-ventilated areas only. Have adequate general exhaust. PROTECTIVE GLOVES: Solvent protective gloves. OTHER PROTECTIVE EQUIPMENT: Self-contained breathing apparatus if threshold limit is exceeded.

XI. SPECIAL PRECAUTIONS & STORAGE DATA

STORAGE TEMPERATURE (min/max): 32 degrees F (0 degrees C)/122 degrees F (50 degrees C)
AVERAGE SHELF LIFE: 6 months to 2 years (unopened can) @ 77 degrees F (25 degrees C)
SPECIAL SENSITIVITY(heat, light, moisture): If container is exposed to high heat, container may pressurize slightly. If container is opened and used as supply can, do not re-seal can as pressure may build up due to reaction producing carbon dioxide, which might cause re-sealed container to pressurize and burst.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in tightly closed container and protect from moisture and foreign materials. At maximum storage temperatures noted, material may slowly polymerize without hazard. Ideal storage temperature range is 50-81 degrees F (10 - 27 degrees C).

Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 4 Reactivity: 0 Special Hazards: None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 1: Division name was modified.

Section 9: Property description for optional properties was modified.

Section 2: Ingredient table was modified.

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3M MSDSs are available at www.3M.com

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT: >200°F/ 93°C Seta Flash Closed cup

LOWER FLAMMABLE LIMIT %: N/E

UPPER FLAMMABLE LIMIT %: N/E

FIRE EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES: Fight like a fuel oil fire. Cool fire exposed containers with water spray. Firefighter should wear OSHA/NIOSH approved self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARD: Closed containers exposed to high temperatures, such as fire conditions may rupture.

SECTION V - HEALTH HAZARD/TOXICOLOGICAL PROPERTIES

OVEREXPOSURE EFFECTS:

ACUTE EFFECTS:

EYES: Contact with eyes can cause irritation, redness, tearing, blurred vision, and/or swelling.

SKIN: Contact with skin can cause irritation, (minor itching, burning and/or redness), Dermatitis, defatting may be readily absorbed through the skin.

INHALATION: Inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and/or asphyxiation. Aspiration of material into lungs may result in chemical pneumonitis which can be fatal.

INGESTION: Ingestion can cause gastrointestinal irritation, nausea, vomiting, diarrhea.

CHRONIC EFFECTS:

Overexposure to this material has apparently been known to cause the following effects in lab animals: skin sensitization, respiratory system irritation.

CARCINOGEN: YES ☐ NO ☒

TERATOGEN: YES ☐ NO ☒

MUTAGEN: YES ☐ NO ☒

PRIMARY ROUTES OF EXPOSURE: skin, inhalation, eyes

FIRST AID:

INHALATION: If inhaled, remove victim from exposure to a well-ventilated area. Make them comfortably warm, but not hot. Use oxygen or artificial respiration as required. Consult a physician.

SKIN: For skin contact, wash promptly with soap and excess water.

EYES: For eye contact, flush promptly with excess water for at least fifteen minutes. Consult a physician.

INGESTION: If ingested, do not induce vomiting. Give victim a glass of water. Call a physician immediately.

SECTION VI - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Open flames & heat. .

INCOMPATIBILITY MATERIALS TO AVOID: Strong acids, alkalis, oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide, Carbon Monoxide and Carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VII - SPILL AND DISPOSAL PROCEDURE

SPILLS, LEAK OR RELEASE: Ventilate area. Remove all possible sources of ignition. Avoid prolonged breathing of vapor. Contain spill with inert absorbent.

WASTE DISPOSAL: Dispose of in accordance with local, state, and federal regulations.

SECTION VIII - PROTECTION INFORMATION

RESPIRATORY PROTECTION: If component TLV limits are exceeded, use NIOSH/MSHA approved respirator to remove vapors. Use an air-supplied respirator if necessary. With general ventilation, does not require a respirator.

VENTILATION: Use adequate ventilation in volume and pattern to keep TLV/PEL below recommended levels.

PROTECTIVE GLOVES: To prevent prolonged exposure use rubber gloves; solvents may be absorbed through the skin

EYE PROTECTION: Safety Glasses or goggles with splash guards or side shields.

OTHER PROTECTIVE EQUIPMENT: Wear protective clothing as required to prevent skin contact.

SECTION IX - HANDLING AND STORAGE PRECAUTIONS

STORAGE AND HANDLING: Use with adequate ventilation. Avoid contact with eyes and skin. Avoid breathing vapors. Do not store the product above 100°F/38°C. Do not flame, cut, braze weld or melt empty containers. Keep the product away from heat, open flame, and other sources of ignition. Avoid contact with strong acids, alkalis and oxidizers.

SECTION X - ADDITIONAL INFORMATION

SHIPPING INFORMATION: Please comply with DOT regulations in USA

HMIS RATING:

Health	2	4 = Extreme
Fire	1	3 = High
Reactivity	1	2 = Moderate
		1 = Slight
		0 = Insignificant

Personal Protection - See Section VIII

CALIFORNIA PROPOSITION 65:

Trace amounts of epichlorohydrin, a chemical known to the State of California to cause cancer, are present in this product. However, given the low level and application of this product, typical uses do not constitute a significant risk under the standard.

SECTION 313 SUPPLIER NOTIFICATION:

This product contains the following toxic chemicals subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372:

<u>CHEMICAL NAME</u>	<u>CAS</u>	<u>% BY WGT</u>
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Not Applicable

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS THAT ARE COPIED AND DISTRIBUTED FOR THIS CHEMICAL

ABBREVIATIONS

IARC = International Agency for Research on Cancer
ACGIH = American Conference of Governmental Industrial Hygienists
NIOSH = National Institute of Occupational Safety and Health
TLV = Threshold Limit Value
PEL = Permissible Emission Level
DOT = Department of Transportation
NTP = National Toxicology Program
N/AV = Not Available
N/AP = Not Applicable
N/E = Not Established
N/D = Not Determined

PREPARED FOR:

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REVIEWED ON
SUPERSEDES
REVISION

May 17, 2004
March 1, 2003
Format

The information in the Material Safety Data Sheet has been compiled from our experience and from data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of the safety precautions as may be necessary. We reserve the right to revise Material Safety Data Sheets from time to time as new technical information becomes available. The user has the responsibility to contact the Company to make sure that the MSDS is the latest one issued.



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Industrial Spray Adhesive
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 12/17/2007
Supersedes Date: 12/10/2007

Document Group: 16-6276-6

Product Use:

Specific Use: aerosol adhesive
Intended Use: Industrial use

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Propane	74-98-6	15 - 25
Non-Volatile Components - N.J.T.S. Reg No. 04499600-6503	Trade Secret	15 - 25
Acetone	67-64-1	10 - 20
2-Methylpentane	107-83-5	10 - 20
Cyclohexane	110-82-7	10 - 20
2,3-Dimethylbutane	79-29-8	3 - 7
3-Methylpentane	96-14-0	3 - 7
2,2-Dimethylbutane	75-83-2	1 - 5
Hexane	110-54-3	0.1 - 1.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol

Odor, Color, Grade: clear, sweet fruity odor

General Physical Form: Gas

Immediate health, physical, and environmental hazards: Aerosol container contains flammable gas under pressure. Closed

containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Aerosol container contains flammable material under pressure. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

Intentional concentration and inhalation may be harmful or fatal.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are

followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature

No Data Available

Flash Point

-50 °F [Test Method: Closed Cup]

Flammable Limits - LEL

1.1 % volume

Flammable Limits - UEL

12.8 % volume

OSHA Flammability Classification:

Class IA Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available.

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools.

Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Do not pierce or burn container, even after use. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Avoid skin contact. Aerosol container contains flammable gas under pressure. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc. For industrial or professional use only.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use with functioning spray booth or local exhaust. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Nitrile Rubber, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Acetone	ACGIH	TWA	500 ppm	Table A4
Acetone	ACGIH	STEL	750 ppm	Table A4
Acetone	OSHA	TWA, Vacated	750 ppm	
Acetone	OSHA	TWA	1000 ppm	Table Z-1
Acetone	OSHA	STEL, Vacated	1000 ppm	
Cyclohexane	ACGIH	TWA	100 ppm	
Cyclohexane	OSHA	TWA	300 ppm	Table Z-1
Hexane	ACGIH	TWA	50 ppm	Skin Notation*
Hexane	OSHA	TWA, Vacated	50 ppm	Table Z-1A
Hexane	OSHA	TWA	500 ppm	Table Z-1A
HEXANE (ISOMERS OTHER THAN N-HEXANE)	ACGIH	TWA	500 ppm	
HEXANE (ISOMERS OTHER THAN N-HEXANE)	ACGIH	STEL	1000 ppm	
Propane	ACGIH	TWA	1000 ppm	
Propane	OSHA	TWA	1000 ppm	Table Z-1

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Aerosol
Odor, Color, Grade:	clear, sweet fruity odor
General Physical Form:	Gas
Autoignition temperature	No Data Available
Flash Point	-50 °F [Test Method: Closed Cup]
Flammable Limits - LEL	1.1 % volume
Flammable Limits - UEL	12.8 % volume
Boiling point	Not Applicable
Density	0.745 g/ml
Vapor Density	2.97 [Ref Std: AIR=1]

Specific Gravity	0.745 [Ref Std: WATER=1]
pH	Not Applicable
Melting point	Not Applicable

Solubility in Water	Nil
Evaporation rate	1.90 [Ref Std: ETHER=1]
Hazardous Air Pollutants	<=1.5 % weight [Test Method: Calculated]
Volatile Organic Compounds	61 % [Test Method: calculated SCAQMD rule 443.1]
Percent volatile	75 - 85 % weight

VOC Less H₂O & Exempt Solvents
Viscosity

61 % [Test Method: calculated SCAQMD rule 443.1]
Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat; Sparks and/or flames

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. Facility must be capable of handling aerosol cans. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility. Dispose of empty product containers in a sanitary landfill.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-4941-4930-5, 62-4941-4935-4

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Cyclohexane	110-82-7	10 - 20
Hexane	110-54-3	0.1 - 1.5

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
Cyclohexane	110-82-7	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 4/26/07
<u>Product Name</u> Nickel-safe Ice machine cleaner	<u>Product Number</u> 4287	<u>Product Use</u> Descaler for nickel-plated ice machines.		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
phosphoric acid	<30	7664-38-2	1mg/m3	1mg/m3
citric acid	<5	77-92-9		

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: No Data.
Potential Health Effects
Eyes: Severely irritating to eyes on contact. May cause burns. (Primary Route of Exposure)
Skin: Causes severe irritation. May cause burns on prolonged contact.
Ingestion: Severely irritating to mouth, throat and stomach.
Inhalation: Mists irritating to upper respiratory tract.
Chronic Exposure: None known.
Carcinogenicity: No Data.
Medical Conditions Aggravated by Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin: Flush skin with plenty of water for at least 15 minutes. If irritation persists, get medical attention.
Ingestion: Do NOT induce vomiting. Give 1 or 2 glasses of water to dilute. Get immediate medical attention.
Inhalation: Remove to fresh air.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: None°C/None°F
Autoignition Temp: No Data.°C/No Data.°F
Hazardous Products of Combustion: No Data.
Flammable Limits in Air: N/A
Extinguishing Media: Product is nonflammable or combustible.
Reactivity and Explosion Hazards: N/A
Special Firefighting Procedures: None known.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Small spills may be mopped up and residues flushed to drain with water. Rinse mop before storing. Neutralize with dilute solution of soda ash.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: This product will withstand an occasional accidental freezing without loss of performance. Thaw and remix before use. This is a complete product. Do not add or mix with other chemicals.

Storage Requirements: This product will withstand an occasional accidental freezing without loss of performance. Thaw and remix before use. This is a complete product. Do not add or mix with other chemicals.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Not normally required.

Eye Protection: Splash goggles.

Protective Clothing: Rubber Gloves.

Exposure Guidelines: No Data.

Specific Engineering Controls (such as ventilation, enclosed process): Good general ventilation.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: -18°C/0°F	% Volatile by Weight: No Data.%
Color: Green	Vapor Density [air =1]: N/A	Evaporation Rate: N/A
Odor: Mild chemical odor	Vapor Pressure: N/A	Specific Gravity: 1.188
Boiling Point: >93°C/>200°F	Solubility in Water: Complete	pH (concentrate): < 1

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable

Hazardous Polymerization: Will not occur.

Compatibilities: Strong bases, ammonia, chlorine bleach.

Reactive Conditions to avoid: none known.

Decomposition Products: Forced ignition of dried residues may produce oxides of phosphorus.

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
No Data.				

SECTION 12 – ECOLOGICAL INFORMATION

Hazardous Ingredients	Aquatic Toxicity Data
No Data.	

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Unused material is corrosive waste (D002). Used material may be sewered in accordance with all applicable regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
T (and)	Not Regulated.			
IMO (Water)	No Data.			
ICAO (Air)	No Data.			

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	Class E - Corrosive Material.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	All ingredients are TSCA listed.
VOC: (volatile Organic Compounds)	0%
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
PA (HMIS) Rating: (Hazardous Materials Identification System)	Health Hazard.....: 2 Fire Hazard.....: 0 Reactivity.....: 0 Specific Hazard...: X

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



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Material Safety Data Sheet

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SECTION I - Material Identity

Item Name	
Part Number/Trade Name	LEXITE PS AEROSOL
National Stock Number	6850P5185
CAGE Code	<u>20913</u>
Part Number Indicator	A
MSDS Number	186264
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	CHEMSEARCH DIV OF NCH CORP
P.O. Box	152170
City	IRVING
State	TX
Country	US
Zip Code	75015
Emergency Phone	800-424-9300 CHEMTREC
Information Phone	972-438-1381

MSDS Preparer's Information

Date MSDS Prepared/Revised	29JUL98
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Active Indicator

N

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Hazard Storage Compatibility Code	NR
NRC License Number	NR
Net Propellant Weight (Ammo)	NR
Appearance/Odor	WATER-WHITE, ALCOHOL ODOR, TRANSPARENT
Boiling Point	155
Melting Point	NR
Vapor Pressure	42
Vapor Density	> 1
Specific Gravity	0.737
Decomposition Temperature	NR
Evaporation Rate	> 2
Solubility in Water	APPRECIABLE
Percent Volatiles by Volume	NR
Chemical pH	6
Corrosion Rate	NR
Container Type	F
Container Pressure Code	2
Temperature Code	4
Product State Code	L

SECTION IV - Fire and Explosion Hazard Data

Flash Point	38
Flash Point Method	SCC
Lower Explosion Limit	1
Upper Explosion Limit	NE
Extinguishing Media	FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL
Special Fire Fighting Procedures	WEAR SCBA. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS. VAPORS MAY SETTLE IN LOW OR CONFINED AREAS AND FLASH BACK EXPLOSIVELY
Unusual Fire/Explosion Hazards	MATERIAL IS VOLATILE AND READILY GIVES OFF VAPORS WHICH MAY TRAVEL ALONG THE GROUND AND BE IGNITED AT DISTANT IGNITION SOURCES. FLAME EXTENSION = > 30 INCHES

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	NR
Materials to Avoid	CONCENTRATED NITRIC ACID AND SULFURIC ACIDS, STRONG OXIDIZERS, ACRYLALDEHYDE, ETHYLENEIMINE, MISTURES OF SODIUM PEROXIDE
Hazardous Decomposition Products	CARBON MONOXIDE AND CARBON DIOXIDE
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	WILL NOT OCCUR

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	[CHRONIC] MAY CAUSE NAUSEA, VOMITING, HEADACHE, RINGING OF THE EARS, INSOMNIA, TREMBLING, VERTIGO, DOUBLE VISION, AND SEVERE EYE DAMAGE, REPEATED ORAL EXPOSURE TO ETHANOL MAY RESULT IN THE DEVELOPMENT OF PROGRESSIVE LIVER INJURY WITH FIBROSIS, PROLONGED AND REPEATED EXPOSURE TO HEXANE MAY DAMAGE PERIPHERAL NERVE TISSUE
Carcinogenicity: NTP	NO
Carcinogenicity: IARC	NO
Carcinogenicity: OSHA	NO
Explanation of Carcinogenicity	NONE
Symptoms of Overexposure	[EYE] IRRITATION, REDNESS, AND SWELLING. SUPERFICIAL INJURY TO THE CORNEA, [SKIN] MAY CAUSE MILD IRRITATION. PROLONGED OR REPEATED CONTACT MAY LEAD TO DERMATITIS AND DEFATTING OF THE SKIN. HARMFUL IF ABSORBED THROUGH THE SKIN. [INHAL] DIZZINESS, DROWSINESS, DISTURBANCES OF VISION, TINGLING, NUMBNESS AND SHOOTING PAINS IN THE HANDS AND FOREARMS. MAY ALSO CAUSE NAUSEA, VOMITING AND FAINTNESS. HIGH VAPOR CONCENTRATIONS MAY CAUSE A BURNING SENSATION IN THE THROAT/NOSE, AND STINGING AND WATERING IN THE EYES. CENTRAL

Medical Cond. Aggrevated by Exposure
Emergency/First Aid Procedures

NERVOUS SYSTEM EFFECTS.
UNCONSCIOUSNESS AND DEATH.
[INGEST] GASTROINTESTINAL
IRRITATI
NR
[INHAL] REMOVE FROM AREA TO
FRESH AIR. SEEK MED ATTEN
[EYE] REMOVE ALL CONTACT
LENSES AND FLUSH WITH PLENTY
OF WATER FOR SEVERAL MINUTES.
SEEK MED ATTEN IF IRRITATION
DEVELOPS [SKIN] WASH AFFECTED
AREAS WITH PLENTY OF
SOAP/WATER FOR SEVERAL
MINUTES. SEEK MED ATTEN IF
IRRITATION DEVELOPS [INGEST]
GIVE 3 TO 4 GLASSES OF WATER
BUT DO NOT INDUCE VOMITING. IF
VOMITING OCCURS GIVE FLUIDS
AGAIN, GET IMMEDIATE MED
ATTENTION DO NOT GIVE ANYTHING
BY MOUTH IF UNCONSCIOUS OR
CONVULSING. [NOTE] INGESTION /
SUBSEQUENT VOMITING CAN LEAD
TO ASPIRATION INTO THE LUNGS
WHICH CAN CAUSE DAMAGE AND MAY
BE FATAL

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled

AEROSOL - THEREFORE SPILL IS
UNLIKELY. IF DOES OCCUR USE AN
INERT MATERIAL TO ABSORB
SPILLED MATERIAL AND PLACE
INTO LABELED CONTAINER FOR
PROPER DISPOSAL

Neutralizing Agent

NA

Waste Disposal Method

DISPOSE OF IN ACCORDANCE WITH
ALL FEDERAL, STATE AND LOCAL
REGULATIONS. TYPICAL DISPOSAL
IS TO WRAP THE EMPTY AEROSOL
CONTAINER IN SEVERAL LAYERS OF
NEWSPAPER AND DISPOSE OF IN
THE TRASH. AEROSOL RECYCLING
PROGRAMS ARE AVAILABLE IN MANY
AREAS

Handling and Storage Precautions

INDOORS MIN TEMP 32 F / MAX
TEMP 90 F. STORE AT MODERATE
TEMPERATURE. DO NOT STORE NEAR
HEAT, HOT SURFACES, SPARKS,
OPEN FLAMES OR OTHER SOURCES
OF IGNITION

Other Precautions

READ THE ENTIRE LABEL BEFORE
USING THIS PRODUCT. KEEP OUT
OF REACH OF CHILDREN

SECTION VIII - Control Measures

Respiratory Protection	TYPICAL RESPIRATOR DOES NOT REQUIRE RESPIRATOR. HOWEVER IF CONDITIONS EXCEED TYPICAL LEVELS USE A NIOSH APPROVED RESPIRATOR
Ventilation	GENERAL (MECH) ROOM VENTILATION IS TYPICALLY SATISFACTORY, USE LOCAL VENTILATION IF NECESSARY TO PROVIDE ADEQUATE AIR
Protective Gloves	NEOPRENE, RUBBER OR NITRILE
Eye Protection	SAFETY GLASSES
Other Protective Equipment	NA
Work Hygienic Practices	NR
Supplemental Health/Safety Data	NR

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	YES
Protect Respiratory	YES
Chronic Indicator	YES
Contact Code	UNKNOWN
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN
Specific Hazard and Precaution	TARGET ORGANS: LIVER, CENTRAL NERVOUS SYSTEM, KIDNEY

SECTION X - Transportation Data

Container Quantity	12
Unit of Measure	OZF

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	5.84
Volatile Organic Compounds (G/L)	699.8588

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	ETHANOL (50-60%)
CAS Number	64175

Proprietary	NO
Percent	60
OSHA PEL	1000 PPM 2
ACGIH TLV	1000 PPM 1
Ingredient #	02
Ingredient Name	METHANOL (<4%)
CAS Number	67561
Proprietary	NO
Percent	4
OSHA PEL	200 PPM 2
ACGIH TLV	200 PPM 1
Ingredient #	03
Ingredient Name	CARBON DIOXIDE (5-10%)
CAS Number	124389
Proprietary	NO
Percent	10
OSHA PEL	5000 PPM 2
ACGIH TLV	5000 PPM 1
Ingredient #	04
Ingredient Name	HEXANE (25-30%)
CAS Number	110543
Proprietary	NO
Percent	30
OSHA PEL	500 PPM 2
ACGIH TLV	50 PPM 1
Ingredient #	05
Ingredient Name	HEXANE ISOMERS (1-5%)
CAS Number	1003
Proprietary	NO
Percent	5
OSHA PEL	500 PPM 2
ACGIH TLV	500 PPM 1
Ingredient #	06
Ingredient Name	ISOPROPYL ALCOHOL (5-10%)
CAS Number	67630
Proprietary	NO
Percent	10
OSHA PEL	400 PPM 2
ACGIH TLV	400 PPM 1

MATERIAL SAFETY DATA SH

Radiator Specialty Company

1900 WILKINSON BLVD. CHARLOTTE, NC 28208 (704) 377-6555

POISON INFORMATION & EMERGENCY: 303-623-5716

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.

US DEPARTMENT OF LABOR

Occupational Safety and Health Administration.
(Non-Mandatory Form) Form Approved OMB No. 1218-0072

SECTION I GENERAL INFORMATION

PRODUCT NAME DE-ICER
PART NUMBER DE-1

NOTE: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT	WT%	C.A.S. NO.	TLV (ACGIH-X—OSHA—)
Methanol*	45-55	67-56-1	200 ppm
Ethylene Glycol * +	3-7	107-21-1	100 ppm
Carbon Dioxide	3-5	124-38-9	5000 ppm

*THESE CHEMICALS ARE SUBJECT TO REPORTING REQUIREMENTS OF SARA TITLE III, 40 CFR PART 372.
+ THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

Comments

Components not identified are non-hazardous according to 29 CFR 1910.1200

SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Specific Gravity (H ₂ O=1)	0.792	pH	N/A
Solubility in Water	Infinite	Solubility in Solvent	N/A
Flash Point (Method) - F°	54 (TCC)	% Volatiles By Wt.	>92
Melting Point - F°	-144°F	Boiling Point - F°	148°F
Vapor Pressure (mmHg)	N/A	Vapor Density (Air=1)	1.11
Evaporation Rate (Butyl Acetate=1)	5.9		
Appearance and Odor	Clear liquid with alcohol odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: (LEL: 6.0 UEL 36.5)

Water Fog Foam X CO₂ X Dry Chemical X

SPECIAL FIRE FIGHTING PROCEDURES. Wear self-contained, positive pressure breathing apparatus and protective clothes. Cool containers exposed to heat with water fog.

UNUSUAL FIRE AND EXPLOSION HAZARDS Aerosol containers are under pressure and may burst when heated

SECTION V REACTIVITY DATA

Stable	X	Unstable	Corrosive	NO	Hazardous Polymerization?	Yes	No	X
Incompatibilities Strong oxidizing agents/ will attack some forms of plastics and rubber.								
Hazardous Decomposition or Byproducts Carbon monoxide and carbon dioxide may be formed during combustion..								

SECTION VI HEALTH HAZARD INFORMATION

Recommended TLV of Product		100 ppm
EYE CONTACT	SKIN CONTACT	
May be slightly irritating to eyes	Slight irritant. Prolonged exposure may cause dermatitis.	
INHALATION	INGESTION	HARMFUL OR FATAL IF SWALLOWED!
Avoid chronic exposure		May cause diarrhea, nausea, and cramps.
OTHER Methanol is a poisonous, narcotic chemical and if ingested can cause blindness and death. Reports have associated repeated and prolonged over exposure to solvents with permanent brain and nervous system damage..		

SECTION VII EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
Flush eyes with water for 15 minutes while lifting eyelids. Consult a physician immediately.
SKIN CONTACT
Wash with soap and water
INHALATION
Move to fresh air. If breathing has stopped give artificial respiration or oxygen as required. Get medical attention.
INGESTION
If swallowed contact a physician immediately. Only induce vomiting at the instruction of a physician. Aspiration into lungs can cause chemical pneumonitis, which can be fatal.

SECTION VIII SPECIAL PROTECTION INFORMATION

CONSUMER		BULK HANDLING (Prolonged Exposure)
RESPIRATORY PROTECTION	N/A	TLV is exceeded, wear organic vapor respirator
VENTILATION	Use with adequate ventilation	General
EYE PROTECTION	N/A	Goggles
PROTECTIVE CLOTHING	N/A	Rubber gloves and apron

SECTION IX PRECAUTIONS FOR SAFE HANDLING AND USE

SPILL OR LEAK PROCEDURE	Remove ignition sources, ventilate area, confine spill, wipe up with absorbent material, transfer to waste drum.	
WASTE DISPOSAL METHOD	Dispose of in accordance with all applicable government laws and regulations.	
STORAGE AND HANDLING PRECAUTION	Store and use away from all heat and ignition sources.	
OTHER PRECAUTIONS	KEEP AWAY FROM CHILDREN AND ANIMALS! AVOID EYE AND SKIN EXPOSURE! AVOID BREATHING VAPORS!	

HAZARD INFORMATION LABEL DATA	
HAZARD CODE	FLAMMABILITY
4 = Extreme	
3 = High	
2 = Moderate	
1 = Slight	
0 = Negligible	
pr = pressure	
	HEALTH
	REACTIVITY
	SPECIAL

Supersedes NEW

OSHA Revised MAY 1989

Title R. GEER - CHEMIST

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification.



MATERIAL SAFETY DATA SHEET

LPS Micro X Fast Evaporating Contact Cleaner

Revision 4

Revision Date 6/2/2008

Supersedes: 1/28/2008

Section 1 • Product and Company Identification

Product Name: LPS Micro X Fast Evaporating Contact Cleaner

Part Number: 04516, 04555, C04516, C04555

Chemical Name: Hydrocarbon and Isopropanol mixture

Product Use: A cleaner designed to remove dirt, moisture, dust, flux, or oxides from the internal components of electronic or precision equipment such as circuit boards, and the internal components of electronic devices.

Manufacturer Information: LPS Laboratories, 4647 Hugh Howell Rd., Tucker, GA, USA 30084

TEL: 1 770-243-8800

Emergency Telephone Number: 1-800-424-9300 Chemtrec;
Outside U.S.: (703) 527-3887

FAX: 1 770-243-8899

Website: <http://www.lpslabs.com>

PLAIN LANGUAGE HAZARD SUMMARY

Material Safety Data Sheets can be confusing. Federal and State laws require us to include a great deal of technical information that probably won't help the non-professional. LPS includes this "PLAIN LANGUAGE HAZARD SUMMARY" to address the questions and concerns of the average worker. If you have additional health, safety or product questions, don't hesitate to call us at 800-241-8334.

Worker Toxicity

LPS Micro-X Fast Evaporating Contact Cleaner is a fast drying industrial cleaning solvent designed to remove soil and other contaminants from circuit boards and other electronic devices with minimal effect on sensitive plastics. It contains a mixture of heptane, hexanes and isopropyl alcohol which can be irritating to skin at a minimum and if handled improperly can be dangerous. We suggest you wear gloves and avoid extended exposure to unprotected skin. Don't get it in your eyes (it stings), or breath large amounts of the vapor, (it will dry out your nasal passages and if you breathe large amounts in poorly ventilated areas it can make you dizzy and even sick). Don't spray LPS Micro-X Fast Evaporating Contact Cleaner for extended periods without adequate ventilation. If you're going to perform work involving a lot of product in a poorly ventilated area, use of a respirator or self-contained breathing equipment may be required. For more exposure and first aid information, refer to MSDS Sections 2, 8 and 11.

Flammability

LPS Micro-X Fast Evaporating Contact Cleaner is extremely flammable, having a flash point below 0 °F (-18°C). Do not spray onto live electrical equipment or in or around ignition sources. Store product away from heat sources.

Disposal

If you spill LPS Micro-X Fast Evaporating Contact Cleaner, notify the proper environmental or safety department at your company right away. If LPS Micro-X Fast Evaporating Contact Cleaner becomes contaminated with another substance and is rendered unusable for cleaning, the resulting mixture may fall under at least one hazardous classification. See section 13 for more details.



MATERIAL SAFETY DATA SHEET

LPS Micro X Fast Evaporating Contact Cleaner

Revision 4

Revision Date 6/2/2008

Supersedes: 1/28/2008

Section 2 • Hazards Identification

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Emergency Overview:

Aerosol: DANGER: Extremely Flammable. Aerosol contents under pressure. Harmful or Fatal if Swallowed. May cause skin & eye irritation. Keep away from heat, spark, open flame or any sources of ignition. Use in well ventilated areas. Vapors harmful. Do not store at temperatures above 49°C (120°F). In case of contact with eyes, flush eyes with plenty of water and contact physician. If swallowed, do not induce vomiting. Contact physician or poison control center immediately. After contact with skin, wash with soap and water. KEEP OUT OF REACH OF CHILDREN.

Bulk: DANGER: Extremely Flammable. Harmful or Fatal if Swallowed. May cause skin & eye irritation. Keep away from heat, spark, open flame or any sources of ignition. Use in well ventilated areas. Vapors harmful. Do not store at temperatures above 49°C (120°F). In case of contact with eyes, flush eyes with plenty of water and contact physician. If swallowed, do not induce vomiting. Contact physician or poison control center immediately. After contact with skin, wash with soap and water. KEEP OUT OF REACH OF CHILDREN.

Primary route(s) of entry: Skin and Eye contact. Inhalation.

Potential Acute Health Effects:

- Eyes:** Irritating to eyes
Skin: Repeated exposure may cause skin dryness or cracking.
Inhalation: Excessive inhalation of vapors can cause irritation of the respiratory tract, nausea, dizziness or headache.
Ingestion: Product has a low order of acute oral toxicity, but ingestion of large quantities may cause nausea, vomiting, and gastrointestinal irritation. May cause injury if aspirated into lungs.

Potential Chronic Health Effects:

Carcinogenic Effects: NTP: No OSHA: No ACGIH: No

Mutagenic Effects: None

Teratogenic Effects: This material (or component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Target Organs:

Prolonged and repeated exposure to n-hexane may cause peripheral neuropathy by damaging peripheral nerve tissue (that of the arms and legs) and result in muscular weakness and loss of sensation. Prolonged and repeated inhalation of high levels of mixed isomers of hexane resulted in kidney damage in male rats. The effects observed are the same as those seen in male rats exposed to other hydrocarbons. The mechanism by which these chemicals cause the characteristic kidney toxicity is unique to the male rat and the kidney effects are not expected to occur in man.

Breathing isopropanol vapors has caused damage to the lining of the middle ear in experimental animals. The relevance of this finding to humans is uncertain. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: liver abnormalities, kidney damage.

Medical conditions aggravated by exposure:

Persons with pre-existing central nervous system (CNS) disease, neurological conditions, skin disorders, chronic respiratory diseases, or impaired liver or kidney function should avoid exposure.

Signs and Symptoms:

Stinging in eyes. Repeated or prolonged skin contact can cause redness, irritation, and scaling of the skin (dermatitis). Breathing of high vapor concentrations may cause headaches, stupor, irritation of throat and eyes, and kidney effects.



MATERIAL SAFETY DATA SHEET

LPS Micro X Fast Evaporating Contact Cleaner

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Section 3 • Composition /Information on Ingredients

INGREDIENT NAME	CASRN	Weight Percent
2-Methylpentane	107-83-5	40 – 50
3-Methylpentane	96-14-0	10 – 20
2,3-Dimethylbutane	79-29-8	10 – 20
2,2-Dimethylbutane	75-83-2	5 – 10
n-Heptane	142-82-5	1 – 5
Isopropanol	67-63-0	1 – 5
Carbon Dioxide (aerosol)	124-38-9	1 – 5
n-Hexane	110-54-3	1 – 3

Section 4 • First Aid Measures

- Eyes:** Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Do not use eye ointment. Seek medical attention immediately.
- Skin:** Remove contaminated shoes and clothing. Clean affected area thoroughly with mild soap and water. Do not use ointments. Seek medical attention if irritation persists.
- Inhalation:** Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, seek medical attention immediately.
- Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended. Seek medical attention immediately.

Section 5 • Fire Fighting Measures

Flash point: TCC CLOSED CUP: < -17°C (-0°F) bulk liquid

Flammable limits: LOWER: 1.2% UPPER: 7.0% **Auto ignition Temperature:** 306°C (582.8°F)

Products of Combustion: Carbon monoxide and carbon dioxide.

Firefighting media: SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Cool containing vessels with water jet in order to prevent pressure build-up, auto ignition or explosions.

Sensitivity to Impact: None. **Sensitivity to Static Discharge:** Yes

Protection Clothing (Fire): Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles.

Special Remarks on Explosion Hazards: High heat will cause explosive rupture of containers and the rapid spread of fire.



MATERIAL SAFETY DATA SHEET

LPS Micro X Fast Evaporating Contact Cleaner

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Supersedes: 1/28/2008

Section 6 • Accidental Release Measures

Containment Procedures	Small Spill and Leak:	Eliminate ignition sources. Absorb with an inert material and dispose of properly.
	Large Spill and Leak:	Eliminate ignition sources, secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection. Pick up free liquid for disposal using absorbent pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal.
Clean-Up Procedures	Recover free product and place in suitable container for disposal.	
Evacuation Procedures	Ventilate area of leak or spill. Keep unnecessary and unprotected people away.	
Special Procedures	Remove all sources of ignition. Ventilate area. Wear appropriate protective equipment during cleanup.	

Section 7 • Handling and Storage

Handling: DO NOT spray into or around ignition sources. Do not allow material to come into contact with eyes or skin. Wear appropriate protective equipment during handling. Keep container closed. Do not breathe vapors or mists. Use only with adequate ventilation. Wash thoroughly after handling.

Storage: Keep in original container. Keep container tightly closed. Store in a well ventilated area away from sources of ignition.

Precautions to be taken in handling and storage: Store all materials in dry, well-ventilated area. Avoid breathing vapors. Ground and bond containers before transferring materials.

Section 8 • Exposure Controls / Personal Protection

Exposure Guidelines:

Component	CASRN	OSHA TWA-PEL	OSHA STEL	ACGIH-TLV	ACGIH-STEL	NIOSH REL
2-Methylpentane*	107-83-5	500 ppm	1000 ppm	500 ppm	1000 ppm	100 ppm
3-Methylpentane*	96-14-0	500 ppm	1000 ppm	500 ppm	1000 ppm	100 ppm
2,3-Dimethylbutane*	79-29-8	500 ppm	1000 ppm	500 ppm	1000 ppm	100 ppm
2,2-Dimethylbutane*	75-83-2	500 ppm	1000 ppm	500 ppm	1000 ppm	100 ppm
Isopropanol*	67-63-0	400 ppm	Not Established	200 ppm	1000 ppm	400 ppm
n-Heptane*	142-82-5	500 ppm	500 ppm	400 ppm	500 ppm	85 ppm
n-Hexane*	110-54-3	500 ppm	Not Established	50 ppm	Not Established	50 ppm
Carbon Dioxide (aerosol)	124-38-9	5000 ppm	Not Established	5000 ppm	30000 ppm	5000 ppm

*Note: Exposure guidelines provided by supplier.



MATERIAL SAFETY DATA SHEET

LPS Micro X Fast Evaporating Contact Cleaner

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Revision Date 6/2/2008

Supersedes: 1/28/2008

Engineering Controls: Provide general and/or local exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

Personal Protection:

- Eyes:** Safety glasses with side shields. If splashing or spraying is anticipated, use goggles.
- Respiratory:** Typical use of this product under normal conditions does not require the use of respiratory protection. If extended spraying of product will be made under poor ventilation, use appropriate organic vapor filtering respirators.
- Hands:** Normally no hand protection is required; however, if product will be sprayed for an extended period, "overspray" onto skin may occur. If so, use protective gloves conforming to appropriate regulations. Please observe the instructions regarding permeability and breakthrough time that are provided by the supplier of the gloves. Take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion and the contact time.
- General Hygiene Considerations:** Wash thoroughly after handling. Have eye-wash facilities immediately available.

Section 9 • Physical and Chemical Properties

Appearance:	Clear Liquid	Color:	Colorless/water-white
Odor:	Mild or faint alcohol	Evaporation Rate:	<1 (Ethyl Ether = 1)
Solubility:	<5% by weight	Decomposition Temperature:	Not Established
Boiling Point:	Conc. = 60.5°C at 1 atm.	Flash Point:	-18°C (concentrate)
Specific Gravity (H₂O=1):	0.64 – 0.66 @ 25°C	Flashpoint Method:	TCC
Vapor Density (air=1):	~3.0	Partition Coefficient (octanol/water):	>1
Vapor Pressure:	47 kPa @38°C	VOC Content:	95.8%, 630 g/L, 5.3 #/L (aerosol) 100%, 657g/L, 5.5 #/L (bulk)
pH	Not Applicable	Viscosity:	<3 cSt @ 25°C
Flammable Limits:	LOWER: 1.2% UPPER: 7%	Melting Point:	Not Applicable



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Section 10 • Stability and Reactivity

- Chemical Stability:** Product is stable under recommended storage conditions.
- Conditions to Avoid:** Keep away from heat and ignition sources. Exposure to direct sunlight for extended periods. Temperatures in excess of 50°C.
- Incompatibility:** Extremely reactive or incompatible with oxidizing agents.
- Hazardous Decomposition:** Combustion will generate smoke, possibly thick and choking, resulting in zero visibility and combustion products include carbon monoxide and carbon dioxide.
- Hazardous Polymerization:** Will not occur.

Section 11 • Toxicological Information

Acute and Chronic Toxicity

A: General Product Information

An acute toxicity study of this product has not been conducted. Information given in this section relates only to individual constituents contained in this preparation.

B: Component Analysis

Component	CASRN	LC ₅₀	LD ₅₀
2-Methylpentane	107-83-5	3125 ppm inhalation/rat/4H*	Not Available
3-Methylpentane	96-14-0	Not available	Not Available
2,3-Dimethylbutane	79-29-8	Not Available	Not Available
2,2-Dimethylbutane	75-83-2	Not Available	Not Available
Isopropanol	67-63-0	16000 ppm inhalation/rat/4H*	5045 mg/kg oral/rat* 5030 – 7900 mg/kg dermal/rabbit*
n-Heptane	142-82-5	103 gm/m ³ /4hr. rat	222 mg/kg mouse
Carbon Dioxide	124-38-9	Not available	Not appropriate
n-Hexane	110-54-3	48000 ppm inhalation/rat/4H*	25 g/kg oral/rat* 1.3 g/kg dermal/rabbit*

*Note: Supplier data



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Section 12 • Ecological Information

Ecological studies have not been conducted for this product. The following information is available for component(s) of this product.

Mobility in Environment: Highly-volatile. Readily absorbed into soil. **Persistence / Degradability:** Only slightly biodegradable

Bioaccumulation / Accumulation: Minimal bioaccumulation potential

Other Adverse Effects: None Known.

Ecotoxicity

Component	CAS RN	Test	Species	Results
2-Methylpentane	107-83-5	48-hour EC ₅₀	Daphnia magna	2.1 mg/L
		96-hour LC ₅₀	Microcystis pyrifera	10 mg/L
Isopropanol	67-63-0	48-hour EC ₅₀	Pimephales promelas	10, 000 mg /L
		96-hour LC ₅₀	Gambusia affinis	14, 000, mg/L
n-Hexane	110-54-3	48-hour EC ₅₀	Water flea	3.87 mg/L
		96-hour LC ₅₀	Lepomis macrochirus	4.12 mg/L

Section 13 – Disposal Considerations

Waste Status: Aerosol products, if depressurized and emptied to less than 2.5 cm of fluid contents are classified as non-hazardous waste under 40 CFR 261.7 (U.S.). If disposed of in its received form, this item carries waste codes D001 and D003 (aerosol only). (U.S.)

Disposal: Waste must be disposed of in accordance with national, regional and local environmental control regulations.

Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information inaccurate, incomplete, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive than federal laws and regulations.

Section 14 • Transport Information

Aerosol

Mode	Shipping Name	Hazard Class	Subclass	UN Number	Technical Name	Hazard Label	Packing Group	Emergency Response Guide
D.O.T. Ground	Consumer Commodity	ORM-D	NA	NA	NA	ORM-D	NA	NA
IATA	Aerosols, flammable	2.1	NA	1950	NA	Flammable Gas	NA	NA
IMDG (Regular)	Aerosol	2.1	NA	1950	NA	Flammable Gas	NA	F-D, S-U
IMDG (Special)	Dangerous Goods in Limited quantities of Class 2	NA	NA	1950	NA	NA	NA	F-D, S-U



MATERIAL SAFETY DATA SHEET

LPS Micro X Fast Evaporating Contact Cleaner

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Section 14 • Transport Information, continued

Bulk Material

Mode	Shipping Name	Hazard Class	Subclass	UN Number	Technical Name	Hazard Label	Packing Group	Emergency Response Guide
D.O.T. Ground	Flammable liquid, n.o.s.	3	NA	1993	Hexanes, Isopropanol	Flammable Liquid	II	NA
IATA	Flammable liquid, n.o.s.	3	NA	1993	Hexanes, Isopropanol	Flammable Liquid	II	NA
IMDG (Regular)	Flammable liquid, n.o.s.	3	NA	1993	Hexanes, Isopropanol	Flammable Liquid	II	F-E, <u>S-E</u>
IMDG (Special)	Flammable liquid, n.o.s.	3	NA	1993	Hexanes, Isopropanol	Flammable Liquid	II	F-E, <u>S-E</u>

5 gallon containers must be shipped via "cargo aircraft only" for air transport.
55 gallon drums CANNOT be shipped by air!

Section 15 – Regulatory Information

U.S. Federal Regulations

Toxic Substances Control Act (TSCA):

All components of this product are TSCA inventory listed and/or are exempt.

RCRA Hazardous Waste No.: D001, D003 (aerosols only)

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA)

Reportable Quantity: n-hexane- 5000 pounds

Superfund Amendments and Reauthorization Act (SARA) Title III

SARA Section 311/312 (40 CFR 370) Hazard Categories:

Sudden Release of Pressure (aerosols only), Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

Component	CAS Number	Maximum %
n-hexane	110-54-3	3%

Section 112 Hazardous Air Pollutants (HAPs): n-hexane

State Regulations

New Jersey Right to Know:

Aerosol: 2-methylpentane 107-83-5 • 3-methylpentane 96-14-0 • 2,3-dimethylbutane 79-29-8 • 2,2 dimethylbutane 75-83-2 • Heptane 142-82-5 • Isopropanol 67-63-0 • Hexane 110-54-3 • Carbon Dioxide 124-38-9

Bulk: 2-methylpentane 107-83-5 • 3-methylpentane 96-14-0 • 2,3-dimethylbutane 79-29-8 • 2,2 dimethylbutane 75-83-2 • Heptane 142-82-5 • Isopropanol 67-63-0 • Hexane 110-54-3



MATERIAL SAFETY DATA SHEET

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Canadian Environmental Protection Act: All of the components of this product are included on the Canadian Domestic Substances list (DSL).

Canadian Workplace Hazardous Materials Information System WHMIS:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Classification:

Aerosol: Class A, Class B5, Class D2A, Class D2B



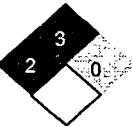
Bulk: Class B5, Class D2A, Class D2B



Other Regulations

Montreal Protocol listed ingredients:	None.
Stockholm Convention listed ingredients:	None.
Rotterdam Convention listed ingredients:	None.
RoHS Compliant:	Yes.

Section 16 • Other Information

MSDS#14516 Responsible Name: Clea Johnson Regulatory Affairs Coordinator	HMIS 1996	HMIS III	<div>NFPA Flammability</div> <div>Health  Reactivity</div>
	Health: 2	Health: *2	
	Flammability: 3	Flammability: bulk 3 Flammability: aerosol 4	
	Reactivity: 0	Physical Hazard: bulk 0 Physical Hazard: aerosol 2	

Notice to Reader:

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Clea L Johnson, Regulatory Affairs Coordinator
LPS Laboratories
A division of Illinois Tool Works

MATERIAL SAFETY DATA SHEET

State Chemical Division - State Industrial Products
3100 Hamilton Avenue, Cleveland, OH 44114 (216) 861-7114

State Chemical Ltd.
1745 Meyerside Dr., Unit #1, Mississauga, Ontario L5T 1C6 (905) 670-4669

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **SSD II**
Product Description: An aerosol solvent degreaser.

24 Hour Emergency CHEMTREC Number: 800-424-9300
MSDS Number: M01057

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS Number	Weight	ACGIH	OSHA
Trichloroethylene	79-01-6	< 55%	50 ppm	100 ppm
Perchloroethylene	127-18-4	< 50%	25 ppm	100 ppm
Carbon Dioxide	124-38-9	< 5.0%	5000 ppm	5000 ppm

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Contents under pressure. Do not puncture, incinerate or expose to temperature above 120°F(49°C). Eye, skin and respiratory irritant. Harmful if inhaled.

POTENTIAL HEALTH EFFECTS

Routes of Exposure:

Eye Contact:

Skin Contact:

Inhalation:

Ingestion:

Medical Conditions Aggravated by Exposure:

Signs and Symptoms of Overexposure:

General:

Exposure may be by inhalation and/or skin or eye contact, depending on conditions of use. To minimize exposure, follow recommendations for proper use, ventilation and personal protective equipment.

Eye irritant. Prolonged contact may lead to corneal damage.

Skin irritant. Solvent action can dry and defat the skin causing the skin to crack, leading to dermatitis.

May irritate respiratory tract. May cause headache, nausea, fatigue, drowsiness, impaired coordination, cardiac sensitisation.

Aspiration hazard if swallowed.

Coronary disease or rhythm disorders of the heart. Respiratory disorders. Acute and chronic liver and kidney disease. Anemia.

Inhalation - Difficulty breathing. Ingestion - vomiting. Skin - redness.

Long term exposure (years) to high concentrations of vapor may cause lung, liver or kidney damage. The solvents listed have been reported to affect the central nervous system. May cause cardiac abnormalities. Perchloroethylene may cause spleen and brain damage.

Trichloroethylene may cause anemia. Can elevate Carboxyhemoglobin levels following exposure.

4. FIRST AID MEASURES

Eye Contact:

Promptly flush with a large amount of water for at least 15 minutes. If irritation persists, get medical attention.

Skin Contact:

Promptly wash with soap and water and rinse thoroughly. Remove contaminated clothing and shoes. Launder clothing before reuse. If irritation persists, get medical attention.

Inhalation:

Remove to fresh air. Administer oxygen if needed. Apply artificial respiration if breathing has stopped. Get medical attention.

Ingestion:

Aspiration hazard. Do not induce vomiting. Never give anything to an unconscious person. Get medical attention.

5. FIRE FIGHTING MEASURES

Flashpoint:

No flame extension. Non-Flammable.

Lower Explosive Limit(LEL):

NA Upper Explosive Limit(UEL): NA

Autoignition Temperature:

NA

Fire and Explosion Hazards:

Heated cans may burst. Keep containers away from heat and open flame. Closed containers may explode when exposed to extreme heat. Toxic gases and vapors (such as Hydrogen Chloride and Carbon Monoxide) may be released in a fire. Symptoms may not be readily apparent. Obtain medical attention.

Extinguishing Media:

Water fog, carbon dioxide, alcohol foam, foam, dry chemical.

Fire Fighting Instructions:

Water may be used to cool containers to prevent pressure build-up and explosion when exposed to extreme heat. If water is used, fog nozzles are preferred. Wear safety goggles and self-contained breathing apparatus. Use equipment or shielding required to protect against bursting or venting containers.

6. ACCIDENTAL RELEASE MEASURES

Avoid breathing vapors. Ventilate area. Dike area to contain spill. Use absorbent sweeping compound to soak up material. Put into container. Dispose as hazardous waste.

7. HANDLING AND STORAGE

Store in cool, dry, well-ventilated areas. Keep away from heat, flames, sparks or other sources of ignition. Store at temperatures below 120°F. Avoid contact with metal surfaces. Do not take internally. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Avoid contact with skin, eyes and clothing. Do not smoke while using. Wash hands after use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use local exhaust sufficient to prevent inhalation of solvent vapors.

Personal Protective Equipment:

Respiratory: If TLV limit cannot be controlled below applicable limits, wear a NIOSH-approved properly fitted respirator designed to remove a combination of particles and vapor.

Eye: Wear approved safety glasses with unperforated sideshields.

Skin: Wear chemically impervious gloves.

Other: An emergency eyewash station or source of clean potable water should be available in case of accidental eye contact. Wear long sleeves and long pants. When spraying more than one half can continuously or more than one can consecutively, use a NIOSH-approved respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Clear.

Odor:

Mildly sweet apple.

Physical State:

Liquid aerosol.

pH:

NA

Vapor Pressure @ 70 °F:

100 - 110

Vapor Density(Air = 1):

Heavier than air.

Boiling Point:

189 °F - 250 °F

Specific Gravity(Water = 1):

1.47 - 1.5

Solubility in Water:

Nil.

Evaporation Rate:

Slower than Ether.

10. STABILITY AND REACTIVITY

Stability:	Stable.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Heat, sparks, flames or other sources of ignition.
Incompatibility:	Strong oxidizers, strong alkalis, reactive metals.
Hazardous Decomposition Products:	Carbon Dioxide, Halogen Acids, Phosgene. May produce fumes when heated to decomposition. Fumes may contain Carbon Monoxide, Chlorine and Hydrogen Chloride.

11. TOXICOLOGICAL INFORMATION

Perchloroethylene is listed as a carcinogen by IARC NTP. Chronic overexposures have caused liver and kidney toxic effects in experimental animals.

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>LD50</u>	<u>LC50</u>
Trichloroethylene	79-01-6	5650 mg/kg (oral rat)	12000 ppm/4 hr (rat)
Perchloroethylene	127-18-4	2629 mg/kg (oral rat)	5040 ppm /8 hr (rat)
Carbon Dioxide	124-38-9	NE	240 mg/l/1 hr (trout)

12. ECOLOGICAL INFORMATION

Marine Pollutant.

13. DISPOSAL CONSIDERATIONS

Do not incinerate. Depressurize container. Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. RCRA Code for Trichloroethylene is U228 and Perchloroethylene is U210. Dispose of in accordance with Federal, State and Local Regulations regarding pollution and waste disposal.

14. TRANSPORT INFORMATION

DOT SHIPPING DATA: Consumer Commodity, ORM-D
CANADIAN TDG: Shipped in accordance with 49 CFR as part of a transborder shipment authorized under Section 5.2 (1) of the Canadian Transportation of Dangerous Goods.
For International and Air Shipments: Aerosols, Nonflammable, 2.2, Subsidiary Risk 6.1, UN1950, Marine Pollutant.

15. REGULATORY INFORMATION

TSCA: All ingredients in this product are listed or exempt from listing on the TSCA Chemical Inventory.
CEPA: All ingredients in this product are listed or exempt from listing on the Canadian DSL/NDSL.
Proposition 65: This product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

<u>CHEMICAL</u>	<u>CAS#</u>	<u>Weight</u>
Perchloroethylene	127-18-4	< 50%
Trichloroethylene	79-01-6	< 55%

SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372.65C):

<u>CHEMICAL</u>	<u>CAS#</u>	<u>Weight</u>
Perchloroethylene	127-18-4	< 50%
Trichloroethylene	79-01-6	< 55%

HMIS RATING: Health = 2 Flammability = 0 Reactivity = 0 Personal Protective Equipment = B

WHMIS RATING: Class A; Class D, Division 1B

16. OTHER INFORMATION

NA = Not Available or Not Applicable
NE = Not Established

Read and follow all label directions and precautions before using the product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF THE REACH OF CHILDREN. While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local Laws and regulations.

HEALTH AND SAFETY INFORMATION: (216) 861-7114

Prepared On: April 2007 Replaces: April 2004 Completed By: Regulatory Affairs Specialist

FICHE SIGNALÉTIQUE DE SÉCURITÉ DE PRODUIT

State Chemical Division – State Industrial Products
3100 Hamilton Avenue, Cleveland, OH 44114 (216) 861-7114

State Chemical Ltd.
1745 Meyerside Dr., Unit #1, Mississauga, Ontario L5T 1C6 (905) 670-4669

1. IDENTIFICATION DU PRODUIT CHIMIQUE ET DE LA SOCIÉTÉ

Nom du produit : **SSD II**
Description du produit : Dégraissant au solvant.

Numéro d'urgence CHEMTREC 24 h/24 : 800-424-9300
Numéro de la fiche signalétique de produit : M01057

2. COMPOSITION/INFORMATION SUR LES INGRÉDIENTS

Ingrédients dangereux	Numéro CAS	Poids	ACGIH	OSHA
Trichloréthylène	79-01-6	< 55 %	50 ppm	100 ppm
Perchloréthylène	127-18-4	< 50 %	25 ppm	100 ppm
Dioxyde de carbone	124-38-9	< 5,0 %	5000 ppm	5000 ppm

3. IDENTIFICATION DES DANGERS

VUE GÉNÉRALE D'URGENCE

Contenu sous pression. Ne pas percer, incinérer ou exposer à des températures supérieures à 49°C. Irrite les yeux, la peau et les voies respiratoires. Nocif en cas d'inhalation.

EFFETS POSSIBLES SUR LA SANTÉ

Voies d'exposition :	L'exposition peut se faire par inhalation et/ou par contact cutané ou oculaire, selon les conditions d'emploi. Pour minimiser l'exposition, suivre les conseils d'utilisation, ventiler et porter un équipement de protection individuelle.
Voies de pénétration :	Ingestion, inhalation, peau
Contact oculaire :	Irritant oculaire. Risque de lésion de la cornée en cas de contact prolongé.
Contact cutané :	Irritant cutané. L'action du solvant peut dessécher et délipider la peau et être la cause de crevasses et d'eczéma.
Inhalation :	Risque d'irritation des voies respiratoires. Risque de maux de tête, nausée, fatigue, somnolence, dégradation de la coordination, sensibilité cardiaque
Ingestion :	Risque d'absorption par aspiration si ingéré
Troubles médicaux aggravés par l'exposition :	Maladies coronariennes ou troubles du rythme cardiaque, troubles respiratoires, maladies du foie et des reins aiguës et chroniques
Signes et symptômes de surexposition :	Anémie
En général :	Inhalation - difficulté à respirer. Ingestion - vomissements. Peau - rougeur
	Une exposition prolongée (des années) à des concentrations de vapeur élevées peut causer des lésions aux poumons, au foie ou aux reins. Selon des études, les solvants listés peuvent agir sur le système nerveux central. Risque d'anomalies cardiaques. Le perchloréthylène peut être la cause de lésion de la rate et de lésion cérébrale. Le trichloréthylène peut causer une anémie. Risque d'augmentation des taux de concentration de carboxyhémoglobine dans le sang suite à l'exposition.

4. PREMIERS SOINS

Contact oculaire : Rincer immédiatement et abondamment avec de l'eau pendant au moins 15 minutes. Consulter un médecin si les symptômes persistent.
Contact cutané : Laver immédiatement la partie atteinte avec de l'eau et du savon et bien rincer. Enlever les vêtements et les chaussures contaminés. Laver les vêtements avant de les réutiliser. Consulter un médecin si l'irritation persiste.
Inhalation : Sortir la personne au grand air. Au besoin, administrer de l'oxygène. Pratiquer la respiration artificielle en cas d'arrêt de la respiration. Consulter un médecin.
Ingestion : Risque d'absorption par aspiration. Ne pas faire vomir. Ne jamais rien faire absorber à une personne inconsciente. Consulter un médecin.

5. EN CAS D'INCENDIE

Point d'éclair : Aucune prolongation de flamme. Non inflammable.
Limite d'explosivité inférieure (LEL) : néant Limite d'explosivité supérieure (UEL) : néant
Température d'auto-inflammation : néant
Propriétés d'inflammabilité : Risque d'éclatement des bombes chauffées. Éloigner les récipients de la chaleur et des flammes nues. Les récipients fermés risquent d'exploser en cas de chaleur intense. Risque d'émanations de gaz toxiques et de vapeurs (tels que chlorure d'hydrogène et monoxyde de carbone) en cas d'incendie. Les symptômes peuvent ne pas être apparents immédiatement. Consulter un médecin.
Moyens d'extinction : Eau pulvérisée, dioxyde de carbone, mousse anti-alcool, mousse, poudre extinctrice
Lutte contre l'incendie : Refroidir éventuellement les récipients avec de l'eau pour éviter la mise en pression et une explosion en cas de chaleur intense. Pulvériser l'eau de préférence avec une lance à jet brouillard. Porter des lunettes de sécurité avec protection latérales et un appareil respiratoire autonome. Utiliser le matériel et les protections requises pour se protéger en cas d'éclatement ou de la mise à l'air.

6. ÉMISSIONS ACCIDENTELLES

Éviter de respirer les vapeurs. Aérer l'endroit. Contenir les fuites et ne pas laisser le produit se répandre. Absorber le produit avec un agent absorbant. Verser dans un récipient. Détruire comme des déchets dangereux.

7. MANIPULATION ET CONSERVATION

Entreposer à l'abri de l'humidité, dans un endroit frais et bien à aéré. Éloigner de toute source de chaleur, flammes étincelles ou autre source d'inflammation. Conserver à une température inférieure à 48 °C. Éviter le contact avec des surfaces métalliques. Ne pas avaler. Concentrer le produit pour l'inhaler peut être dangereux ou mortel. Éviter tout contact oculaire, cutané ou avec les vêtements. Ne pas fumer pendant l'emploi. Se laver les mains après l'emploi.

8. EXPOSITION/PROTECTION INDIVIDUELLE

Mesures D'ingénierie : Prévoir une ventilation par aspiration à la source suffisant pour éviter l'inhalation de vapeurs de solvant.

Protection Individuelle :

Respiratoire : Si la valeur limite d'exposition ne peut pas être contrôlée sous les seuils de tolérance applicables, porter un appareil respiratoire anti-vapeurs organiques/anti-particules bien ajusté homologué par le NIOSH/MSHA.

Oculaire : Porter des lunettes de sécurité à écrans latéraux non perforés.

Cutanée : Porter des gants imperméables aux produits chimiques.

Autre : Une station d'eyewash de secours ou une source de l'eau potable propre devrait être disponible en cas de contact d'oeil accidentel. Manches longues et pantalons longs. Utiliser un appareil respiratoire homologué par le NIOSH en cas de pulvérisation de plus de la moitié d'une bombe.

9. PROPRIÉTÉS PHYSIQUES ET CHIMIQUES

Aspect :	Transparent	Odeur :	Légère de pomme
État de la matière :	Liquide en aérosol	pH :	néant
Pression de la vapeur @21 °C :	100 - 110	Densité de la vapeur (air = 1) :	Plus lourd que l'air
Point d'ébullition :	87 °C - 121 °C	Densité (eau = 1) :	1,47 - 1,5
Solubilité dans l'eau :	Aucune	Taux d'évaporation :	Plus lent que celui de l'éther

10. STABILITÉ ET RÉACTIVITÉ

Stabilité :	Stable.
Polymérisation dangereuse :	Aucune.
Conditions à éviter :	Chaleur, flammes ou toute autre source d'inflammation.
Incompatibilité :	Agents oxydants forts, alcalis forts, métaux réactifs
Produits de décomposition dangereuse :	Dioxyde de carbone, acides halogènes, phosgène. Chauffé jusqu'à la décomposition, le produit peut produire de la vapeur. Les vapeurs contiennent du monoxyde de carbone.

11. INFORMATIONS TOXICOLOGIQUES

Le perchloréthylène est classé comme étant une substance cancérigène par le CRC et le NTP. Des expériences effectuées sur des animaux ont montré qu'une surexposition prolongée avaient causé des effets toxiques au foie et aux reins.

<u>Ingrédients dangereux</u>	<u>Numéro CAS</u>	<u>LD50</u>	<u>LC50</u>
Trichloréthylène	79-01-6	5650 mg/kg (oral rat)	12000 ppm/4 hr (rat)
Perchloréthylène	127-18-4	2629 mg/kg (oral rat)	5040 ppm /8 hr (rat)
Dioxyde de carbone	124-38-9	NE	240 mg/l/1 hr (trout)

12. INFORMATIONS ÉCOLOGIQUES

Polluant Marin.

13. DESTRUCTION

Ne pas incinérer. Dépressuriser le récipient. Les déchets de ce produit peuvent être considérés dangereux en vertu de la définition de 40 CFR 261 de la RCRA (loi américaine sur la conservation et la récupération des ressources). Le code de RCRA pour le Trichloréthylène est U228 et Perchloroéthylène est U210. Éliminer conformément à la réglementation fédérale, provinciale et locale en matière d'environnement et d'élimination des déchets.

14. TRANSPORT

INFORMATION DE TRANSPORT D.O.T. :	Bien de consommation, AAR-D
TMD AU CANADA :	Expédié en conformité avec 49 CFR dans le cadre d'un envoi transfrontalier autorisé aux termes de la Section 5.2(1) de la loi canadienne sur le transport des marchandises dangereuses.
Envois internationaux et par avion :	Aérosols, ininflammable, 2.2, Danger subsidiaire 6.1, UN1950, Polluant Marin.

15. INFORMATIONS RÉGLEMENTAIRES

TSCA :	Tous les ingrédients de ce produit figurent ou sont dispensés de figurer sur l'inventaire du TSCA.		
LCPE (Canada) :	Tous les ingrédients de ce produit figurent ou sont dispensés de figurer sur les LIS/LES (Canada).		
Proposition 65 (Californie) :	Ce produit contient substances chimique déclarée responsable de cancer et de malformations congénitales ou autres anomalies de la reproduction par l'État de Californie.		
	<u>SUBSTANCE CHIMIQUE</u>	<u>N° CAS</u>	<u>Poids</u>
	Perchloréthylène	127-18-4	< 50%
	Trichloréthylène	79-01-6	< 55%

SARA 313 : Ce produit contient les substances chimiques toxiques suivantes devant être déclarées aux termes de la section 313 de la loi Emergency Planning and Community Right-To-Know Act de 1986 (40 CFR 372.65C) :

<u>SUBSTANCE CHIMIQUE</u>	<u>N° CAS</u>	<u>Poids</u>
Perchloréthylène	127-18-4	< 50%
Trichloréthylène	79-01-6	< 55%

CLASSIFICATION HMIS : Santé = 2 Inflammabilité = 0 Réactivité = 0 Équipement personnel de sécurité = B

CLASSIFICATION SIMDUT : Classe A; Classe D, Division 1B

16. AUTRES INFORMATIONS

néant = non disponible ou sans objet
n.e. = non établi

Lire et suivre toutes les instructions et les précautions d'emploi figurant sur l'étiquette avant d'utiliser le produit. Ces produits sont réservés uniquement à l'usage industriel et par les collectivités. CES PRODUITS NE SONT PAS DESTINÉS À L'USAGE DOMESTIQUE OU À LA REVENTE. GARDER HORS DE LA PORTÉE DES ENFANTS. Bien qu'à notre avis les informations énoncées ci-dessus soient réelles et que le jugement exprimé soit celui d'experts qualifiés, elles ne doivent pas être considérées comme une garantie ou une déclaration pour lesquelles la société assume une responsabilité légale. Ces informations sont données uniquement pour examen, investigation et vérification. L'utilisation des ces informations doit être déterminée par l'utilisateur conformément à la réglementation et à la loi fédérales, d'État et régionales applicables.

INFORMATIONS SUR LA SANTÉ ET LA SÉCURITÉ : (216) 861-7114

Date de Préparation : Avril 2007

Remplace: Avril 2004

Terminée par : Un spécialiste des Affaires réglementaire

PLANILLA DE DATOS DE SEGURIDAD DE LOS MATERIALES

State Chemical Division – State Industrial Products
3100 Hamilton Avenue, Cleveland, OH 44114 (216) 861-7114

State Chemical Ltd.
1745 Meyerside Dr., Unit #1, Mississauga, Ontario L5T 1C6 (905) 670-4669

1. PRODUCTO QUÍMICO Y DATOS DE LA COMPAÑÍA

Nombre del producto: **SSD II**
Descripción del producto: Desengrasante y solvente en aerosol.

Núm. CHEMTREC las 24 horas: 800-424-9300
Número MSDS: M01057

2. COMPOSICIÓN/INFORMACIÓN SOBRE LOS COMPONENTES

Componentes peligrosos	Número CAS	Peso	ACGIH	OSHA
Tricloroetileno	79-01-6	< 55%	50 ppm	100 ppm
Percloroetileno	127-18-4	< 50%	25 ppm	100 ppm
Dióxido de carbono	124-38-9	< 5.0%	5000 ppm	5000 ppm

4. ENUMERACIÓN DE PELIGROS

DESCRIPCIÓN GENERAL DE LAS SITUACIONES DE EMERGENCIA

Contenido bajo presión. No perforar, incinerar ni exponer a temperaturas superiores a los 120 °F (49 °C). Irrita ojos, piel y tracto respiratorio. Nocivo si se inhala.

POSIBLES EFECTOS SOBRE LA SALUD

Vías de exposición:

Contacto con los ojos:

Contacto con la piel:

Inhalación:

Ingestión:

Trastornos de salud agravados por la exposición:

Signos y síntomas de sobreexposición:

Aviso general:

La exposición podría producirse por inhalación y/o por contacto con los ojos o la piel, dependiendo de la forma de uso. Para minimizar la exposición, siga las recomendaciones relativas a uso, ventilación y equipo de protección personal apropiadas.

Irrita los ojos. El contacto prolongado puede producir lesiones en la córnea.

No se absorbe fácilmente. Su acción solvente puede provocar la pérdida de componentes lipídicos de la piel, que se agrietará y provocará dermatitis.

Puede irritar el tracto respiratorio. Puede provocar cefaleas, náuseas, fatiga, somnolencia, pérdida de la coordinación, sensibilización cardíaca.

Riesgo de aspiración si se ingeriera.

Enfermedad coronaria o arritmias cardíacas. Trastornos respiratorios. Lesiones agudas y crónicas de hígado y riñón. Anemia.

Inhalación – Dificultad para respirar. Ingestión - vómitos. Piel - enrojecimiento.

La exposición a largo plazo (años) a altas concentraciones de las emanaciones puede provocar lesiones pulmonares, hepáticas o renales. Se ha indicado que los solventes de esta lista afectan al sistema nervioso central. Puede provocar trastornos cardíacos. El percloroetileno puede provocar lesiones en bazo y cerebro. El tricloroetileno puede provocar anemia. La exposición a este producto puede elevar los niveles de carboxihemoglobina.

4. MEDIDAS DE PRIMEROS AUXILIOS

Contacto con los ojos: Lávese inmediatamente con abundante agua durante al menos 15 minutos. Si la irritación no desapareciera, obtenga atención médica.

Contacto con la piel: Lave inmediatamente las áreas afectadas con agua y jabón y enjuáguese bien. Quite la ropa y los zapatos contaminados. Lave la ropa antes de volver a usarla. Si la irritación no desapareciera, obtenga atención médica.

Inhalación: Traslade a la víctima a un sitio con aire fresco. Si fuera necesario, administre oxígeno. Si la víctima hubiera dejado de respirar, practique respiración artificial. Obtenga atención médica.

Ingestión: Riesgo de aspiración. No induzca el vómito. Jamás administre nada por boca a una persona que haya perdido el conocimiento. Obtenga atención médica.

5. MEDIDAS PARA COMBATIR INCENDIOS

Pto. inflamabilidad: Ninguna extensión de la llama. No inflamable.

Límite explosivo inferior (LEL): NA Límite explosivo superior (UEL): NA

Temperatura de autoignición: NA

Riesgos de fuego y explosión: Las latas calientes pueden explotar. Mantenga los recipientes alejados del calor y de las llamas. Los recipientes cerrados podrían explotar cuando se los expone a calor extremo. En un incendio, el fuego puede hacer que este producto genere gases y vapores tóxicos (cloruro de hidrógeno y monóxido de carbono). Los síntomas podrían no ser inmediatamente evidentes. Obtenga atención médica.

Medio extinguidor: Agua nebulizada, dióxido de carbono, espuma de alcohol, espuma, polvo químico seco.

Instrucciones para combatir el fuego: Puede usarse agua para enfriar los recipientes cerrados y evitar una posible explosión si éstos estuvieran expuestos a calor extremo. Si se usara agua, es preferible usar nebulizadores. Use anteojos de seguridad y aparato para respirar autónomo. Use equipo o la protección requerida para protegerse contra explosiones de los recipientes.

6. MEDIDAS EN CASO DE DERRAME ACCIDENTAL

Evite inhalar los vapores. Ventile el área. Construya una barrera física para contener el derrame. Use un absorbente para recoger el material. Coloque todo en un recipiente y deshágase de ello como residuo contaminante.

7. MANIPULACIÓN Y ALMACENAMIENTO

Guarde en sitios frescos, secos y bien ventilados. Mantenga alejado de calor, llamas, chispas y otras fuentes de ignición. Guarde a temperaturas inferiores a los 120 °F. Evite el contacto con superficies metálicas. No ingerir. El mal uso intencional (la concentración e inhalación deliberada del contenido) puede resultar nocivo o fatal. Evite el contacto con la piel, los ojos y la ropa. No fume mientras manipula este producto. Luego de usar este producto, lávese las manos.

8. CONTROL DE EXPOSICIÓN/PROTECCIÓN PERSONAL

CONTROLES DE INGENIERÍA: Use ventilación local suficiente como para evitar la inhalación las emanaciones del solvente.

Equipo de Protección Personal:

Respiratorio: Si la ventilación no fuera suficiente como para controlar la exposición personal por debajo de los niveles (TLV) requeridos, use equipo para respirar efectivo contra vapores orgánicos/partículas aprobado por NIOSH/ MSHA.

Ojos: Use anteojos de seguridad con protección lateral sin perforaciones o máscara para el rostro.

Piel: Use guantes resistentes a productos químicos.

Otros: Una estación del eyewash de la emergencia o una fuente del agua potable limpia debe estar disponible en caso de que del contacto visual accidental ra ojos. Mangas largas y pantalones largos. Cuando se aplica por atomización y en forma continua más de media lata o más de una lata en aplicaciones consecutivas, use un aparato para respirar aprobado por NIOSH.

9. PROPIEDADES FÍSICAS Y QUÍMICAS

Aspecto:	Claro.	Olor:	Manzana dulce.
Estado de agregación:	Líquido aerosol.	pH:	NA
Presión de vapor a 70 °F:	100 - 110	Densidad de vapor (Aire = 1):	Más pesado que el aire.
Pto. ebullición:	189 °F - 250 °F	Peso específico (Agua = 1):	1.47 - 1.5
Solubilidad en agua:	Despreciable.	Velocidad de evaporación:	Más lento que el éter.

10. ESTABILIDAD Y REACTIVIDAD

Estabilidad:	Estable.
Polimerización peligrosa:	No ocurrirá.
Condiciones a evitar:	Calor, chispas, llamas y otras fuentes de ignición.
Incompatibilidad:	Oxidantes fuertes, álcalis fuertes, metales reactivos.
Productos de descomposición peligrosos:	Dióxido de carbono, ácidos de halógenos, fósforo. Puede producir emanaciones cuando se calienta y se descompone. Estas emanaciones pueden contener monóxido de carbono, cloro y cloruro de hidrógeno.

11. INFORMACIÓN TOXICOLÓGICA

IARC y NTP han incluido al percloroetileno en una lista de productos carcinógenos. La sobreexposición crónica ha causado efectos tóxicos en hígado y riñón de animales de laboratorio.

<u>Componentes peligrosos</u>	<u>Núm. CAS</u>	<u>LD50</u>	<u>LC50</u>
Tricloroetileno	79-01-6	5650 mg/kg (oral rat)	12000 ppm/4 hr (rat)
Percloroetileno	127-18-4	2629 mg/kg (oral rat)	5040 ppm /8 hr (rat)
Dióxido de carbono	124-38-9	NE	240 mg/l/1 hr (trout)

12. INFORMACIÓN ECOLÓGICA

Agente contaminador marina.

13. SUGERENCIAS PARA SU DISPOSICIÓN FINAL

No incinerar. Despresurice el recipiente. Los residuos de este producto podrían ser peligrosos según se definen en 40 CFR 261 de la RCRA (Ley de Conservación y Recuperación de Recursos). El código de RCRA para el Tricloroetileno es Un228 y Percloroetileno es U210. Obedezca todos los reglamentos federales, estatales y locales relativos a productos contaminantes y a la disposición final de residuos.

14. INFORMACIÓN SOBRE TRANSPORTE

DATOS DE EMBARQUE SEGÚN EL DOT (Ministerio de Transporte de los EE.UU.):	Producto para el consumidor, ORM-D
TDG CANADIENSE:	Envíos de acuerdo con 49 CFR como parte de un envío que cruce la frontera autorizado según el Artículo 5.2 (1) de la Ley Canadiense de Transporte de Productos Peligrosos.
Para envíos internacionales y aéreos:	Aerosoles, no inflamable, 2.2, riesgo subsidiario 6.1, UN1950, Agente contaminador marina.

15. INFORMACIÓN SOBRE REGLAMENTOS

TSCA:	Todos los componentes de este producto figuran en la lista de inventario de sustancias químicas de TSCA o están exentas de ese requisito.
CEPA:	Todos los componentes de este producto figuran en la lista canadiense DSL/NDL o están exentos de ese requisito.
Propuesta 65:	Este producto contiene sustancias químicas que el Estado de California considera que produce cáncer y defectos congénitos, o que afecta negativamente la reproducción.

<u>NOMBRE QUÍMICO</u>	<u>Núm. CAS</u>	<u>Peso</u>
Percloroetileno	127-18-4	< 50%
Tricloroetileno	79-01-6	< 55%

SARA 313:	Este producto contiene las siguientes sustancias tóxicas sujetas a los requisitos de información del Artículo 313 de la ley de 1986 (40 CFR 372.65C) de Planeamiento ante emergencias y Derecho a Estar Informado de la Comunidad:
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<u>NOMBRE QUÍMICO</u>	<u>Núm. CAS</u>	<u>Peso</u>
Percloroetileno	127-18-4	< 50%
Tricloroetileno	79-01-6	< 55%

CLASIFICACIÓN HMIS:	Salud = 2	Inflamabilidad = 0	Reactividad = 0	Equipo de protección personal = B
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CLASIFICACIÓN WHMIS:	Clase A; Clase D, División 1B
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16. OTRA INFORMACIÓN

NA = No disponible o No se aplica.
NE = No se ha establecido

Antes de utilizar este producto, lea y obedezca todas las instrucciones y precauciones. Este producto fue formulado para utilizarse únicamente en el ámbito industrial e institucional. NO ES PARA REVENTA NI PARA USO EN EL ÁMBITO HOGAREÑO. MANTENGA FUERA DEL ALCANCE DE LOS NIÑOS. Si bien se considera que los datos contenidos en esta planilla son correctos y las opiniones expresadas son las de calificados expertos, los datos no deberán considerarse como garantía ni como declaración por las que la compañía asume responsabilidad legal alguna. Estos datos se brindan sólo para evaluación, investigación y verificación por parte del cliente. El usuario es quien deberá determinar si cualquier uso que se dé a estos datos e información está de acuerdo con las leyes y reglamentos federales, estatales y locales aplicables.

INFORMACIÓN DE SEGURIDAD Y SALUD: (216) 861-7114

Preparado Encendido: Abril 2007

Reemplaza: Abril 2004

Preparada por: Especialista en reglamentos

MATERIAL SAFETY DATA SHEET

State Chemical Division - State Industrial Products
3100 Hamilton Avenue, Cleveland, OH 44114 (216) 861-7114

State Chemical Ltd.
1745 Meyerside Dr., Unit #1, Mississauga, Ontario L5T 1C6 (905) 670-4669

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **GREASE-B-GONE**
Product Description: Drain cleaner and degreaser.

24 Hour Emergency CHEMTREC Number: 800-424-9300
MSDS Number: 700144

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>Weight</u>	<u>ACGIH</u>	<u>OSHA</u>
Orange Terpenes	5989-27-5	< 98%	NE	NE
Ethoxylated Alcohols	66455-14-9	< 3.0%	NE	NE

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Combustible liquid. May be harmful if swallowed. May cause eye, skin and respiratory irritation.

POTENTIAL HEALTH EFFECTS

Eye Contact: May cause eye irritation.
Skin Contact: May cause skin irritation. Avoid prolonged skin contact. May cause dermatitis.
Inhalation: May cause irritation of the respiratory tract.
Ingestion: May be harmful if swallowed. May cause gastro-intestinal disturbances.
General: May aggravate existing lung and skin conditions.

4. FIRST AID MEASURES

Eye Contact: Promptly flush with a large amount of water for at least 15 minutes. Consult a physician if symptoms persist.
Skin Contact: Promptly wash with soap and water and rinse thoroughly. Remove contaminated clothing and launder before reuse. If irritation persists, consult a physician.
Inhalation: Remove to fresh air. If irritation persists, consult a physician.
Ingestion: Do not induce vomiting. Never give anything to an unconscious person. Contact a physician immediately.

5. FIRE FIGHTING MEASURES

Flashpoint(Method): 120°F; 49°C (TCC)
Lower Explosive Limit(LEL): NA Upper Explosive Limit(UEL): NA Autoignition Temperature: NA
Flammable Properties: Keep away from heat, flames, sparks or other sources of ignition. May form flammable mixtures with air when heated to flash point.
Unusual Fire & Explosion Hazards: Improper handling of solvent soaked rags can cause spontaneous combustion. Before disposal, wash rags with soap and water and dry in well-ventilated area or store in a fireproof container with no other flammable or combustible materials present.
Extinguishing Media: Carbon Dioxide, dry chemical, foam.
Fire Fighting Instructions: Wear self-contained breathing apparatus and full protective clothing. Contains oil, water is not effective in fire fighting. Water may be used to cool closed containers to prevent possible explosive when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Small Spills: Ventilate area. Use absorbent to pick up residue and dispose of properly. Avoid discharge to natural waters.
Large Spills: Halt spill at source, dike and contain spill. Use absorbent to pick up residue and transfer to a proper container. Dispose of in accordance with Federal, State and Local regulations.

7. HANDLING AND STORAGE

This product is for industrial use only. Use with adequate ventilation. Wash thoroughly after handling. Do not take internally. Harmful if swallowed. Do not reuse empty containers. Empty product containers may contain product residue. Avoid contact with skin, eyes and clothing. Do not mix with other chemicals. Keep out of reach of children. Keep containers closed when not in use. Store in a well-ventilated area. Do not store with strong oxidizers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use general or local ventilation to keep exposure levels below exposure limits.
Personal Protective Equipment:
Respiratory: If personal exposure cannot be controlled below applicable limits by ventilation, wear a NIOSH approved, properly fitted organic vapor/particulate respirator.
Eye: Safety glasses or goggles with unperforated sideshields are recommended.
Skin: Wear chemically impervious gloves such as Nitrile.
Other: An emergency eyewash station or source of clean potable water should be available in case of accidental eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear	Odor:	Citrus
Physical State:	Liquid	pH:	NA
Boiling Point:	221°F; 105°C	Evaporation Rate:	NA
Solubility in Water:	Emulsifiable	Specific Gravity:	0.838 - 0.848
Density:	7.0 lbs/gal; 0.84 kg/L	VOC Content:	97%

10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Heat, sparks or open flame.
Incompatibility: Oxidizing agents.
Hazardous Decomposition Products: Carbon Dioxide, Carbon Monoxide.

11. TOXICOLOGICAL INFORMATION

IARC / NTP / OSHA: This product contains no ingredient at 0.1% or greater that is listed as a human carcinogen.

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>LD50</u>	<u>LC50</u>
Orange Terpenes	5989-27-5	5.6-6.6 g/kg (mouse oral)	NE
Ethoxylated Alcohols	66455-14-9	4.6 g/kg(oral rat)	NE

12. ECOLOGICAL INFORMATION

NA

13. DISPOSAL CONSIDERATIONS

Do not reuse empty containers. Dispose of in accordance with the Federal, State, and Local regulations regarding pollution. Avoid discharge to natural waters.

14. TRANSPORT INFORMATION

DOT Shipping Data: Combustible Liquid. Ships as non-hazardous due to limited quantity exemption.
Canadian TDG: Shipped in accordance with 49 CFR as part of a transborder shipment authorized under Section 5.2 (1) of the Canadian Transportation of Dangerous Goods.

For International and Air Shipments of 1 gallon and smaller sized containers: Dangerous Goods Limited Quantity.
For International and Air Shipments of containers larger than 1 Gallon: Flammable Liquid N.O.S. (Terpene Hydrocarbon), 3.3, UN1993, III

15. REGULATORY INFORMATION

TSCA: All ingredients in this product are listed or exempt from listing on the TSCA Chemical Inventory.
CEPA: All ingredients in this product are listed or exempt from listing on the Canadian DSL/NDSL.
Proposition 65: Raw materials used in this product have identified the opportunity for the presence of very low levels of the following Proposition 65 chemicals:
Ethylene Oxide (75-21-8) < 0.20 ppm, Naphthalene (91-20-3) < 30 ppm.

SARA 313: This product contains no toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

HMIS RATING: HEALTH = 1 FLAMMABILITY = 2 REACTIVITY = 0 PPE = B

WHMIS RATING: Class B, Division 3; Class D, Division 2B

16. OTHER INFORMATION

NA = Not Available or Not Applicable
NE = Not Established

Read and follow all label directions and precautions before using the product. This product is intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF THE REACH OF CHILDREN. While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local Laws and regulations.

HEALTH AND SAFETY INFORMATION: (216) 861-7114

Prepared On: January 2006

Replaces: January 2003

Completed By: Regulatory Affairs

FICHE SIGNALÉTIQUE

State Chemical Division – State Industrial Products
3100 Hamilton Avenue, Cleveland, OH 44114 (216) 861-7114

State Chemical Ltd.
1745 Meyerside Dr., Unit #1, Mississauga, Ontario L5T 1C6 (905) 670-4669

1. IDENTIFICATION DU PRODUIT CHIMIQUE ET DE LA SOCIÉTÉ

Nom du produit : **GREASE-B-GONE**
Description du produit : produit débouche-conduite et dégraissant

Numéro d'urgence CHEMTREC 24 h/24 : 800-424-9300
Numéro de fiche signalétique : 700144

2. COMPOSITION/INFORMATION SUR LES INGRÉDIENTS

Ingrédients dangereux	Numéro CAS	Poids	ACGIH	OSHA
Terpènes d'orange	5989-27-5	< 98%	n.e.	n.e.
Alcools éthyloxyés	66455-14-9	< 3,0%	n.e.	n.e.

3. IDENTIFICATION DES DANGERS

SITUATIONS D'URGENCE

Liquide combustible. Peut être nocif en cas d'ingestion. Peut causer une irritation des yeux, la peau et les voies respiratoires.

EFFETS POSSIBLES SUR LA SANTÉ

Contact oculaire : Peut causer une irritation de l'œil.
Contact cutané : Peut causer une irritation de la peau. Éviter les contacts prolongés avec la peau. Peut causer une dermatite.
Inhalation : Peut causer une irritation des voies respiratoires.
Ingestion : Peut être nocif en cas d'ingestion. Peut causer des troubles gastro-intestinaux.
En général : Peut aggraver les problèmes pulmonaires et cutanés existants.

4. PREMIERS SOINS

Contact oculaire : Rincer rapidement à grande eau pendant 15 minutes au minimum. Si les symptômes persistent, consulter un médecin.
Contact cutané : Laver rapidement la peau à l'eau et au savon et rincer avec soin. Enlever les vêtements et chaussures contaminés et laver avant réutilisation. Si l'irritation persiste, consulter un médecin.
Inhalation : Faire sortir la victime à l'air frais. Si l'irritation persiste, consulter un médecin.
Ingestion : Ne pas provoquer de vomissement. Ne jamais rien donner à une personne inconsciente. Contacter un médecin immédiatement.

5. EN CAS D'INCENDIE

Point d'éclair (méthode) : 49°C (vase clos Tag)
Limite d'explosivité inférieure (LEL) : néant Limite d'explosivité supérieure (UEL) : néant Température d'auto-inflammation : néant
Propriétés d'inflammabilité : Garder à l'écart de la chaleur, de flammes, étincelles et autres sources d'inflammation. En cas de chauffage jusqu'au point d'éclair, peut former des mélanges inflammables avec l'air.
Risques Peu communs D'Incendie Et D'Explosion : La manipulation inexacte des chiffons imbibés dissolvants peut causer la combustion spontanée. Avant disposition, lavez les chiffons avec de l'eau le savon et et séchez dans le secteur bien-aéré ou entreposé dans un récipient ignifuge sans d'autres matériaux inflammables ou combustibles actuels.
Moyens d'extinction : Dioxyde de carbone, poudre chimique, mousse extinctrice.
Lutte contre l'incendie : Porter un appareil respiratoire autonome et une tenue protectrice intégrale. Contient de l'huile, l'eau n'est pas un moyen d'extinction efficace. Utiliser de l'eau pour rafraîchir les récipients hermétiques exposés à une chaleur extrême pour écarter les risques d'explosion.

6. ÉMISSIONS ACCIDENTELLES

Petits déversements : Ventiler la zone. Utiliser un matériau absorbant pour récupérer le résidu et éliminer de façon appropriée. Éviter de décharger dans les eaux naturelles.
Déversements importants : Interrompre le déversement à la source, l'endiguer et le contenir. Utiliser un matériau absorbant pour récupérer le résidu et le transférer dans un récipient approprié. Éliminer conformément aux réglementations fédérale, provinciale et locale en vigueur.

7. MANUTENTION ET ENTREPOSAGE

Ce produit est destiné à un usage industriel uniquement. Utiliser avec une ventilation appropriée. Se laver avec soin après manipulation. Ne pas ingérer. Nocif en cas d'ingestion. Ne pas réutiliser les récipients vides. Les récipients vides peuvent conserver des résidus de produit. Éviter tout contact avec la peau, les yeux et les vêtements. Ne pas mélanger avec d'autres produits chimiques. Garder hors de portée des enfants. Garder les récipients fermés lorsqu'ils ne sont pas utilisés. Entreposer dans un endroit bien ventilé. Ne pas entreposer avec des oxydants forts.

8. CONTRÔLE DE L'EXPOSITION / PROTECTION PERSONNELLE

Moyens techniques : utiliser une ventilation générale ou locale pour maintenir les niveaux d'exposition en dessous des limites admissibles.
Équipement de protection individuelle :
respiratoire : Si la ventilation ne permet pas de maintenir l'exposition individuelle en dessous des limites admissibles, prévoir le port d'un appareil respiratoire pour particules et vapeurs organiques agréé NIOSH correctement ajusté.
oculaire : Il est conseillé de porter des lunettes de sécurité à écrans latéraux non perforés.
cutanée : Gants chimiquement imperméables d'usage tels que des nitriles.
autre : Une station d'eyewash de secours ou une source de l'eau potable propre devrait être disponible en cas de contact d'œil accidentel.

9. PROPRIÉTÉS PHYSIQUES ET CHIMIQUES

Aspect :	transparent	Odeur :	agrumes
État physique :	liquide	pH :	néant
Point d'ébullition :	105°C	Taux d'évaporation :	néant
Solubilité dans l'eau :	émulsifiable	Densité :	0,838 – 0,848
Masse volumique :	840 g/l	Teneur en composés organiques volatils :	97%

10. STABILITÉ ET RÉACTIVITÉ

Stabilité :	stable.
Polymérisation dangereuse :	ne se produit pas.
Conditions à éviter :	chaleur, étincelles, flamme nue.
Incompatibilité :	agents oxydants.
Produits de décomposition dangereux :	dioxyde de carbone, monoxyde de carbone.

11. INFORMATIONS TOXICOLOGIQUES

CIRC / NTP / OSHA : Ce produit ne contient aucun ingrédient déclaré cancérigène humain à des teneurs supérieures ou égales à 0,1%.

<u>Ingrédients dangereux</u>	<u>Numéro CAS</u>	<u>LD50</u>	<u>LC50</u>
Terpènes d'orange	5989-27-5	5.6-6.6 g/kg (mouse oral)	n.e.
Alcools éthoxylés	66455-14-9	4.6 g/kg (orai rat)	n.e.

12. INFORMATIONS ÉCOLOGIQUES

néant

13. ÉLIMINATION

Ne pas réutiliser les récipients vides. Éliminer conformément aux réglementations fédérale, provinciale et locale en matière d'environnement. Éviter de décharger dans les eaux naturelles.

14. TRANSPORT

Données D.O.T. :	Liquide combustible. Bateaux comme dus nonhazardous à l'exemption limitée de quantité.
TMD (Canada) :	Expédié en conformité avec 49 CFR dans le cadre d'un envoi transfrontalier autorisé aux termes de la Section 5.2(1) de la loi canadienne sur le transport des marchandises dangereuses.

Envois internationaux et par avion en récipients de 1 gallon (3,78 l) ou moins : Marchandises dangereuses Quantité limitée

Envois internationaux et par avion en récipients de plus de 1 gallon (3,78 l): LIQUIDE INFLAMMABLE, n.s.a. (Hydrocarbure terpénique), Classe 3.3, Groupe d'emballage III, UN1993

15. INFORMATIONS RÉGLEMENTAIRES

TSCA :	Tous les ingrédients de ce produit figurent ou sont dispensés de figurer sur l'inventaire du TSCA.
LCPE (Canada) :	Tous les ingrédients de ce produit figurent ou sont dispensés de figurer sur les LIS/LES (Canada).
Proposition 65 (Californie) :	Les matières premières premières utilisées dans ce produit ont identifié l'occasion pour la présence des niveaux très bas des produits chimiques suivants de la proposition 65: Oxyde d'éthylène (75-21-8), < 0.20 ppm et Naphthalene (91-20-3) < 30 ppm.

SARA 313 : Ne produit ne contient aucune substance chimique toxique devant être déclarée aux termes de la section 313 de la loi Emergency Planning and Community Right-To-Know Act de 1986 (40 CFR 372).

CLASSIFICATION HMIS : SANTÉ = 1 INFLAMMABILITÉ = 2 RÉACTIVITÉ = 0 PROTECTION INDIVIDUELLE = B

CLASSIFICATION SIMDUT : Classe B, Division 3 ; Classe D, Division 2B

16. AUTRES INFORMATIONS

néant = non disponible ou sans objet
n.e. = non établi

Lire et suivre toutes les instructions et les précautions d'emploi figurant sur l'étiquette avant d'utiliser le produit. Ce produit est destiné à l'industrie et aux collectivités uniquement. IL N'EST PAS DESTINÉ À UN USAGE DOMESTIQUE OU À LA REVENTE. GARDER HORS DE PORTÉE DES ENFANTS. Bien que les informations ci-dessus soient jugées exactes et que les avis exprimés soient ceux d'experts qualifiés, les données fournies ne tiennent pas lieu de garantie ou de déclaration engageant la responsabilité juridique de la société. Ces informations sont fournies à des fins d'examen, de recherche et de vérification. L'utilisation de ces informations sera déterminée par l'utilisateur, conformément aux lois et réglementations nationales, provinciales et locales en vigueur.

INFORMATIONS SUR LA SANTÉ ET LA SÉCURITÉ : (216) 861-7114

Date de Préparation : Janvier 2006

Remplace : Janvier 2003

Par : Affaires réglementaires

PLANILLA DE DATOS DE SEGURIDAD DE LOS MATERIALES

State Chemical Division – State Industrial Products
3100 Hamilton Avenue, Cleveland, OH 44114 (216) 861-7114

State Chemical Ltd.
1745 Meyerside Dr., Unit #1, Mississauga, Ontario L5T 1C6 (905) 670-4669

1. PRODUCTO QUÍMICO Y DATOS DE LA COMPAÑÍA

Nombre del producto: **GREASE-B-GONE**
Descripción del producto: Limpiador y desengrasante de drenajes.

Núm. CHEMTREC (emergencias) las 24 horas: 800-424-9300
Núm. MSDS: 700144

2. COMPOSICIÓN/INFORMACIÓN SOBRE LOS COMPONENTES

<u>Componentes peligrosos</u>	<u>Número CAS</u>	<u>Peso</u>	<u>ACGIH</u>	<u>OSHA</u>
Terpenos de la naranja	5989-27-5	< 98%	NE	NE
Alcoholes etoxilados	66455-14-9	< 3.0%	NE	NE

3. ENUMERACIÓN DE PELIGROS

DESCRIPCIÓN GENERAL DE LAS SITUACIONES DE EMERGENCIA

Líquido combustible. Podría ser nocivo si se ingeriera. Podría irritar los ojos, piel y tracto respiratorio.

POSIBLES EFECTOS SOBRE LA SALUD

Contacto con los ojos: Podría irritar los ojos.
Contacto con la piel: Podría irritar la piel. Evite el contacto prolongado con la piel. Puede provocar dermatitis.
Inhalación: Podría irritar el tracto respiratorio.
Ingestión: Podría ser nocivo si se ingeriera. Podría provocar trastornos gastrointestinales.
Aviso general: Puede agravar trastornos ya existentes en pulmones y piel.

4. MEDIDAS DE PRIMEROS AUXILIOS

Contacto con los ojos: Lávese inmediatamente con abundante agua durante al menos 15 minutos. Si los síntomas no desaparecieran, consulte a un médico.
Contacto con la piel: Lávese inmediatamente con agua y jabón; enjuáguese bien. Quite la ropa y los zapatos contaminados y lave antes de volver a usarla. Si la irritación no desapareciera, consulte a un médico.
Inhalación: Traslade a la víctima a un sitio con aire fresco. Si la irritación no desapareciera, consulte a un médico.
Ingestión: No induzca el vómito. Jamás administre nada por vía oral a una persona que haya perdido el conocimiento. Comuníquese de inmediato con un médico.

5. MEDIDAS PARA COMBATIR INCENDIOS

Pto. inflamabilidad (método): 120°F; 49°C (TCC)
Límite explosivo inferior (LEL): NA Límite explosivo superior (UEL): NA Temperatura de autoignición: NA
Inflamabilidad: Mantenga alejado de objetos calientes, llamas, chispas y otras fuentes de ignición. Puede formar mezclas inflamables con el aire cuando se lo calienta hasta el pto. inflamabilidad.
Peligros Inusuales Del Fuego Y De la Explosión: La dirección incorrecta de trapos empapados solventes puede causar la combustión espontánea. Antes de la disposición, lave los trapos con el jabón y agua y séquese en área bien-ventilada o almacénelos en un envase incombustible sin otros materiales inflamables o combustibles presentes.
Medio extinguidor: Dióxido de carbono, productos químicos en polvo, espuma.
Instrucciones para combatir incendios: Use un aparato autónomo para respirar e indumentaria de protección. Por contener aceite, el agua no resultará eficaz para combatir incendios. Puede usarse agua para enfriar los recipientes cerrados y evitar una posible explosión si éstos estuvieran expuestos a calor extremo.

6. MEDIDAS EN CASO DE DERRAME ACCIDENTAL

Derrames pequeños: Ventile el área. Use materiales absorbentes para recoger los residuos y deséchelos como corresponda. No vierta en masas de agua naturales.
Derrames grandes: Detenga el derrame en el propio sitio de origen, coloque una barrera física y contenga el derrame. Use materiales absorbentes para recoger los residuos y transfíralos a un recipiente adecuado. Obedezca todos los reglamentos federales, estatales y locales relativos a la disposición final de residuos.

7. MANIPULACIÓN Y ALMACENAMIENTO

Este producto es sólo para uso industrial. Use con la ventilación adecuada. Lávese bien luego de manipular este producto. No ingerir. Nocivo si se ingeriera. No vuelva a usar los recipientes vacíos. Los recipientes vacíos podrían contener residuos del producto. Evite el contacto con la piel, los ojos y la ropa. No mezcle con otros productos químicos. Mantenga fuera del alcance de los niños. Cuando no los use, mantenga los recipientes bien cerrados. Guarde en un sitio bien ventilado. No guarde con oxidantes fuertes.

8. CONTROL DE EXPOSICIÓN/PROTECCIÓN PERSONAL

Controles de ingeniería: Utilice ventilación general o local para mantener la exposición por debajo de los límites permitidos.
Equipo de protección personal:
Respiratorio: Si la ventilación no fuera suficiente como para controlar la exposición personal por debajo de los niveles requeridos, use equipo para respirar efectivo contra vapores orgánicos/partículas aprobado por NIOSH.
Ojos: Se recomienda usar anteojos de seguridad con protección lateral sin perforaciones.
Piel: Guantes químicamente impermeables del desgaste tales como nitrilo.
Otros: Una estación del eyewash de la emergencia o una fuente del agua potable limpia debe estar disponible en caso de que del contacto visual accidental.ra ojos.

9. PROPIEDADES FÍSICAS Y QUÍMICAS

Aspecto:	Traslúcido	Olor:	Citrus
Estado de agregación:	Líquido	pH:	NA
Pto. ebullición:	221 °F; 105 °C	Velocidad de evaporación:	NA
Solubilidad en agua:	Emulsionable	Peso específico:	0.838 – 0.848
Densidad:	7.0 lbs/gal; 0.84 kg/l	Contenido de C.O.V.:	97%

10. ESTABILIDAD Y REACTIVIDAD

Estabilidad:	Estable.
Polimerización peligrosa:	No ocurrirá.
Condiciones a evitar:	Objetos calientes, chispas y llamas.
Incompatibilidad:	Agentes oxidantes.
Productos de descomposición peligrosos:	Dióxido de carbono, monóxido de carbono.

11. INFORMACIÓN TOXICOLÓGICA

IARC / NTP / OSHA: Este producto no contiene componentes en cantidades > 0.1%, los cuales figuren como carcinógenos para seres humanos.

<u>Componentes peligrosos</u>	<u>Número CAS</u>	<u>LD50</u>	<u>LC50</u>
Terpenos de la naranja	5989-27-5	5.6-6.6 g/kg (mouse oral)	NE
Alcoholes etoxilados	66455-14-9	4.6 g/kg(oral rat)	NE

12. INFORMACIÓN ECOLÓGICA

NA

13. SUGERENCIAS PARA SU DISPOSICIÓN FINAL

No vuelva a usar los recipientes vacíos. Obedezca todos los reglamentos federales, estatales y locales relativos al método de disposición final de productos contaminantes. No vierta en masas de agua naturales.

14. INFORMACIÓN SOBRE TRANSPORTE

Datos del embarque según el DOT (Ministerio de Transporte de los EE.UU.): Líquido combustible. Naves como nonhazardous debido a la exención limitada de la cantidad.
TDG canadiense: Envíos de acuerdo con 49 CFR como parte de un envío que cruce la frontera autorizado según el Artículo 5.2 (1) de la Ley Canadiense de Transporte de Productos Peligrosos.

Para envíos internacionales y aéreos de recipientes de 1 galón o menos: Mercancía peligrosa Cantidad limitada.
Para envíos internacionales y aéreos de recipientes de más de 1 galón: LÍQUIDO INFLAMABLE, N.O.S. (Terpeno), Clase 3.3, Grupo de empaque III, UN1993

15. INFORMACIÓN SOBRE REGLAMENTOS

TSCA: Todos los componentes de este producto figuran en la lista de inventario de sustancias químicas de TSCA o están exentas de ese requisito.
CEPA: Todos los componentes de este producto figuran en la lista canadiense DSL/NDSL o están exentos de ese requisito.
Propuesta 65: Las materias primas usadas en este producto han identificado la oportunidad para la presencia de los niveles muy bajos de los productos químicos siguientes del asunto 65: Óxido del etileno (75-21-8) < 0.20 ppm, Naphthalene (91-20-3) < 30 ppm.

SARA 313: Este producto no contiene sustancias tóxicas sujetas a los requisitos de información del Artículo 313 de la ley de 1986 (40 CFR 372) de Planeamiento ante emergencias y Derecho a Estar Informado de la Comunidad:

CLASIFICACIÓN HMIS: SALUD = 1 INFLAMABILIDAD = 2 REACTIVIDAD = 0 PPE = B

CLASIFICACIÓN WHMIS: Clase B, División 3; Clase D, División 2B

16. OTRA INFORMACIÓN

NA = No disponible o No se aplica
NE = No se ha establecido

Antes de utilizar este producto, lea y obedezca todas las instrucciones y precauciones. Este producto fue formulado para utilizarse únicamente en el ámbito industrial e institucional. NO ES PARA REVENTA NI PARA USO EN EL ÁMBITO HOGAREÑO. MANTENGA FUERA DEL ALCANCE DE LOS NIÑOS. Si bien se considera que los datos contenidos en esta planilla son correctos y las opiniones expresadas son las de calificados expertos, los datos no deberán considerarse como garantía ni como declaración por las que la compañía asume responsabilidad legal alguna. Estos datos se brindan sólo para evaluación, investigación y verificación por parte del cliente. El usuario es quien deberá determinar si cualquier uso que se dé a estos datos e información está de acuerdo con las leyes y reglamentos federales, estatales y locales aplicables.

INFORMACIÓN DE SEGURIDAD Y SALUD: (216) 861-7114

Preparado Encendido: Enero de 2006

Reemplaza: Enero de 2003

Preparada por: Especialista en reglamentos



Zep Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-877-I-BUY-ZEP (428-9937)
Superior Solutions www.zep.com

Material Safety Data Sheet and Safe Handling and Disposal Information

Section 1. Chemical Product and Company Identification

Product name ZEP POWER SOLV II
Product use Solvent Degreaser
Product code 0203
Date of issue 06/11/03 **Supersedes** 04/21/00

This product is not a registered pesticide.

Emergency For MSDS Information:
Telephone Compliance Services 1-877-I-BUY-ZEP (428-9937)
Numbers

For Medical Emergency
INFOTRAC: (877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Printing date: 06/23/08

Prepared By
Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Composition, Information on Ingredients

Name of hazardous ingredients	CAS #	% by Weight	Exposure Limits
TRICHLOROETHYLENE; acetylene trichloride; 1-chloro-2,2-dichloroethylene	79-01-6	90-100	ACGIH TLV (United States, 1989). TWA: 50 ppm STEL: 100 ppm OSHA PEL (United States, 1989). TWA: 50 ppm STEL: 200 ppm

Section 3. Hazards Identification

Acute Effects

Routes of Entry Absorbed through skin. Inhalation. Ingestion.

Skin Hazardous by the following route of exposure: of skin contact (irritant, permeator). Non-sensitizer to skin. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.

Eyes Hazardous by the following route of exposure: of eye contact (irritant). Inflammation of the eye is characterized by redness, watering and itching.

Inhalation Hazardous by the following route of exposure: of inhalation (lung irritant). May cause irritation of respiratory tract, coughing, shortness of breath. Exposure to high concentrations can cause dizziness, lightheadness, headache, nausea, and blurred vision. Higher levels may cause unconsciousness. Severe over-exposure can result in death. Medical conditions aggravated by over-exposure Respiratory and Heart (Cardiac).

Ingestion Hazardous by the following route of exposure: of ingestion. Aspiration hazard if swallowed. Can enter lungs and cause damage. May be harmful if swallowed.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse health effects are lessened by following all prescribed safety precautions, including use of proper personal protective equipment.

HMIS	
Health	2
Flammability	0
Reactivity	0
Personal Protection	B

Carcinogenic Effects Classified 2A (Probable for human.) by IARC, 2 (Reasonably anticipated to be human carcinogens.) by NTP [Trichloroethylene].

Chronic Effects The substance may be toxic to kidneys, liver, peripheral nervous system, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Defatting to the skin. Prolonged skin contact may cause dermatitis with drying and cracking of skin.

See Toxicological Information (section 11)

Section 4. First Aid Measures

Eye Contact Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin Contact Wash contaminated skin with soap and water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head lower than hips to help prevent aspiration. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Section 5. Fire Fighting Measures**

Flash Point Not applicable. **Flammable Limits** Lower: 8% Upper: 10.5%

Flammability Non-combustible. Vapor may cause flash fire.

Fire hazard Cool closed containers exposed to fire with water.

Fire-fighting procedures Use dry chemical, CO₂, water spray (fog) or foam. Wear special protective clothing and positive pressure, self-contained breathing apparatus.

Section 6. Accidental Release Measures

Spill Clean up Put on appropriate personal protective equipment (see section 8). Absorb with an inert material and transfer the spilled material and absorbent to an appropriate waste disposal container. To clean the floor and all objects contaminated by this material, use [***]. detergent. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Section 7. Handling and Storage

Handling Avoid contact with eyes, skin and clothing. Avoid breathing vapors, spray or mists. Use only with adequate ventilation. Watch for accumulation in low confined areas. Wash thoroughly after handling. Wash contaminated clothing before reusing.

Storage Keep container in a cool, well-ventilated area. Keep away from heat and direct sunlight. Keep away from incompatibles. Keep out of the reach of children. Store between the following temperatures: 40°F - 120°F (4.4°C - 49°C).

Section 8. Exposure Controls, Personal Protection**Personal Protection****Protective Clothing (Pictograms)**

Eyes Splash goggles.

Body Chemical-resistant gloves. (Viton)

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Wear appropriate respirator when ventilation is inadequate. Approved/certified respirator with organic vapor cartridge.

**Section 9. Physical and Chemical Properties**

Physical State Liquid. **Color** Clear. Colorless.

pH Not applicable. **Odor** Chlorinated hydrocarbon. (Strong.)

Boiling Point 87.2°C (189°F) **Vapor Pressure** 8 kPa (60 mm Hg) (at 20°C)

Specific Gravity 1.45 (Water = 1) **Vapor Density** 4.5 (Air = 1)

Solubility Insoluble in the following materials: cold water. **Evaporation Rate** 3.1 compared with Ether (anhydrous).

VOC (Consumer) 1458 (g/l). (100%)

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Reactive with oxidizing agents, metals, alkalis.

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products Carbon dioxide., Carbon monoxide., Hydrogen chloride (HCl)., Chlorine and Phosgene gas.

Section 11. Toxicological Information

Toxicity to Animals Trichloroethylene: ^{25,45,50,70
ORAL (LD50): □ Acute: 4920 mg/kg [Rat]. 2402 mg/kg [Mouse].
DERMAL (LD50): □ Acute: 29800 mg/kg [Rabbit].

Section 12. Ecological Information

Ecotoxicity Not available.

Biodegradable/OECD Not available.

Section 13. Disposal Considerations

Waste Information Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Waste Stream Code: U228 - Unused Product
Classification: - (Hazardous waste.)
Origin: - (RCRA waste.)

Consult your local or regional authorities.

Section 14. Transport Information

Proper shipping name None ORM-D Other regulated materials

DOT Classification ORM-D **UN number** Not available.

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

TDG Classification None ORM-D Other regulated materials

Section 15. Regulatory Information**U.S. Federal Regulations**

SARA 313 toxic chemical notification and release reporting:

Trichloroethylene

Clean Water Act (CWA) 311: Trichloroethylene

Clean Air Act (CAA) 112 regulated toxic substances: Trichloroethylene

All Components of this product are listed or exempt from listing on TSCA inventory.

State Regulations**WARNING:** This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.: Trichloroethylene**WHMIS (Canada)**

Class D-1B: Material causing immediate and serious toxic effects (Toxic).

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.

Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

2. Cleaners

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : DAP WELDWOOD CARPENTER'S GLUE
 UPC NUMBER : 00489, 00490, 00491, 00492, 00493, 00494, 00495
 PRODUCT USE/CLASS : Glue

MANUFACTURER: 24 HOUR EMERGENCY:
 DAP INC. TRANSPORTATION: 1-800-535-5053 (352-323-3500)
 2400 BOSTON STREET MEDICAL : 1-800-327-3874 (513-558-5111)
 BALTIMORE, MD 21224

PREPARE DATE : 07/29/1997 GENERAL INFORMATION:
 REVISION NO. : 10 DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)
 REVISION DATE: 12/30/1999

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
------	---------------	------------	------------------

No hazardous ingredients in this product.

----- EXPOSURE LIMITS -----						
	ACGIH		OSHA		COMPANY	
ITEM	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN

(See Section 16 for abbreviation legend)

All remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: CAUTION! May cause eye, nose, skin and throat irritation.

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Prolonged or repeated contact with skin may cause irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Vapor may cause nose and throat irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: None known.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: This product contains small amount of vinyl acetate which is classified as a class 2B carcinogen by IARC. Vinyl acetate was shown to cause cancer in the respiratory tract of laboratory animals. There is no evidence that vinyl acetate causes cancer in humans. The IARC published a monograph on vinyl acetate (1995). In this monograph IARC indicates "there is inadequate evidence in humans for carcinogenicity of vinyl acetate. There is limited evidence in experimental animals for carcinogenicity of vinyl acetate." Normally, this lack of conclusive evidence would place a substance in the IARC Category 3 classification (Not classified as a human carcinogen). However, because vinyl acetate is metabolized to acetaldehyde, which has an IARC 2B (Possibly carcinogenicity to humans) classification, it also has been listed under Category 2B.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: None known.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INGESTION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides. If irritation persists, call Medical in Section I.

SKIN CONTACT: Wash with soap and water. If irritation persists, call Medical in Section I.

INHALATION: Remove to fresh air. Call Medical in Section I immediately.

INGESTION: DO NOT INDUCE VOMITING. Call Medical in Section immediately.

COMMENTS: None.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: >200F
(SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

SPECIAL FIREFIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Use absorbent material or scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Do not take internally.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: None.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Normal room ventilation.

RESPIRATORY PROTECTION: None required.

EYE PROTECTION: Safety glasses with side shields recommended if splash potential exists.

SKIN PROTECTION: None required.

OTHER PROTECTIVE EQUIPMENT: None.

HYGIENIC PRACTICES: Although this product is not considered an eye irritant, inhalation hazard, or a skin contact hazard under normal conditions, it is advisable that personnel minimize skin contact, inhalation of vapors, and eye contact. Wash contaminated clothing before reuse.

(Continued on Page 4)

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE : 210 - 220 F. VAPOR DENSITY : Is lighter than air
ODOR : Slight odor
APPEARANCE : Yellow Liquid EVAPORATION RATE: Is slower than Butyl
SOLUBILITY IN H2O : Miscible Acetate
SPECIFIC GRAVITY : 1.09
VAPOR PRESSURE : 17.5mm Hg @ 68 F.
PHYSICAL STATE : Thick Liquid

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx,
NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

The toxicological properties of this material are unknown, however,
based on the toxicity of its constituents, it is expected to have
relatively low toxicity.

SECTION 12 - ECOLOGICAL INFORMATION

No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Dispose of according to Federal, State, and
Local Standards. This product does not meet the definition of a hazardous
waste according to U.S. EPA Hazardous Waste Management Regulations, 40 CFR
Section 261. State and Local regulations/restrictions are complex and may
differ from Federal regulations. Responsibility for proper waste disposal
is with the owner of the waste.

EPA WASTE CODE - if discarded (40 CFR 261): None.

(Continued on Page 5)

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not Regulated by D.O.T.

DOT HAZARD CLASS: NONE

HAZARD SUBCLASS: NONE

DOT UN/NA NUMBER: NONE

PACKING GROUP: NONE

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
Vinyl Acetate Monomer	108-05-4	0.05-0.1 %

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
None.	

NEW JERSEY RIGHT-TO-KNOW:

The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
Vinyl Acetate polymer	TSRN-010687010009470P
Water	7732-18-5

PENNSYLVANIA RIGHT-TO-KNOW:

The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
Vinyl Acetate polymer	proprietary
Water	7732-18-5

CALIFORNIA PROPOSITION 65:

WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

CHEMICAL NAME	CAS NUMBER
No Proposition 65 chemicals are known to exist in this product.	

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL REGULATIONS: AS FOLLOWS - None.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 07/29/1997

REASON FOR REVISION:

SECTION 1: Address change and new emergency contact phone numbers.

VOC less water, less exempt solvents: 10-15 gm/l

VOC material: 1-5 gm/l

LEGEND: ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
PEL - PERMISSIBLE EXPOSURE LIMIT
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
STEL - SHORT TERM EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
VOC - VOLATILE ORGANIC COMPOUND
NJRTK - NEW JERSEY RIGHT TO KNOW LAW
N.D. - NOT DETERMINED

MSDS# 30207

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >

Material Safety Data Sheet

IMPORTANT NOTICE: This Material Safety Data Sheet (MSDS) is issued by LA-CO Industries, Inc. (LA-CO) in accordance with the U.S. OSHA Hazard Communication Standard, Canadian WHMIS Controlled Products Regulations, British CHIP2 regulation 6, Australian NMRCWHS and ANSI Z400.1-1993 guidelines. The information contained herein must not be altered, deleted or added to, with the exception of adding supplier/importer information in the space provided. LA-CO has no objection to its MSDS being copied if: a) the copy is made for safety-related purposes; and b) no alterations or amendments are made to the text or format of the MSDS, with the exception of adding supplier/importer information in the space provided. LA-CO does not guaranty the accuracy of any MSDS for our products which: a) is not prepared by LA-CO; b) is not authorized by LA-CO; c) is not in the format originally supplied by LA-CO; or d) has otherwise been amended or altered by a third party, with the exception of adding supplier/importer information in the space provided.

Section 1 Product and Company Identification

Product Name:

SLIC-TITE PASTE with PTFE

Revision #: 1-8

Date Prepared: December 7, 1994

Date Revised: February 20, 2007

Manufacturer:

LA-CO INDUSTRIES, Inc. *Markal* Co.

1201 Pratt Blvd.

Elk Grove Village, IL, USA 60007-5746

Information Telephone: 847-956-7600

Emergency Telephone: Call CHEMTREC

USA 800-424-9300

International (Call Collect) 1-703-527-3887

Chemical Formula: Mixture

CAS No.: Not Applicable. Derivation: Not Applicable.

Synonyms: Not Applicable.

General Use: Pipe thread sealant for metal and plastic threads.

Supplier/Importer:

Section 2 Composition/Information on Ingredients

Slic-Tite Paste with PTFE has been biologically evaluated and proven non-toxic and non-irritating within the meaning of the U.S. Federal Hazardous Substances Labeling Act.

No Hazardous ingredients according to the U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canadian WHMIS regulations.

(For Section 2 footnotes: See Section 15)

Section 3 Hazards Identification

EMERGENCY OVERVIEW: None.

POTENTIAL HEALTH EFFECTS:

Primary Entry Routes: None

Acute Effects

Eyes: May cause mechanical irritation.

Skin: Not Applicable.

Ingestion: May cause nausea.

Inhalation: Not Applicable.

Chronic Effects

Eyes: Not Applicable.

Skin: Not Applicable.

Ingestion: Not Applicable.

Inhalation: Not Applicable.

Product Name:

SLIC-TITE PASTE with PTFE

Revision #: 1.8

Date Prepared: December 7, 1994

Date Revised: February 20, 2007

Carcinogenicity: Not Applicable.

Target Organ Effects: Not Applicable.

Medical Conditions Aggravated by Long-Term Exposure: Not Determined.

Other Information: Not Applicable.

HMIS Rating: Health 0, Flammability 1, Reactivity 0

Section 4

First Aid

Eye Contact: Flush with water.

Inhalation: Not Applicable.

Skin Contact: Wash with soap and water.

Other Information: Not Applicable.

Ingestion: Consult physician if irritation develops.

Section 5

Fire Fighting Measures

Flash Point (method): >300°F/150°C (toc)

Flammability Classification: Not Determined.

Autoignition Temperature: Not Determined.

Extinguishing Media: Water, Carbon Dioxide,

LEL: Not Determined. UEL: Not Determined.

Chemical Foam.

Hazardous Combustion Products: Hydrogen Fluoride, Perfluorocarbon olefins, oxides of carbon.

Unusual Fire or Explosion Hazards: PTFE will emit Hydrogen Fluoride and perfluorocarbon olefins above 500°F.

Fire-Fighting Instructions/Equipment: Keep personnel removed and upwind of any fire. Wear full fire-fighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Keep containers cool by spraying with water.

NFPA Rating: Health 2, Flammability 1, Reactivity 0.

Section 6

Accidental Release Measures

Use recommended personal protective equipment (see Section 8).

Small Spill: Scrape up spills and place in steel container. Wash remainder with soap and water. Spill area may be slippery.

Large Spill: Treat same as small spill.

Section 7

Handling and Storage

Handling Precautions: Use recommended personal protective equipment (see Section 8). Wash thoroughly after handling.

Storage Requirements: Store in a cool, dry area.

Section 8

Exposure Controls/Personal Protection

Eye/Face Protection: Eye protection recommended as good work practice.

Engineering Controls: Not Applicable.

Skin Protection: None.

Administrative Controls: Users of this product must be properly trained and qualified in its use.

Respiratory Protection: None.

Other Information: Fumes of decomposition (burning) are toxic.

Other Personal Protective Equipment: None.

Section 9

Physical and Chemical Properties

Appearance/Physical State: White

pH: Not Applicable.

paste-like solid

Specific Gravity (H₂O = 1): 1.48 (12.35 lbs./gal.)

Product Name:

SLIC-TITE PASTE with PTFE

Revision #: 1-8

Date Prepared: December 7, 1994

Date Revised: February 20, 2007

paste/viscous liquid.

Odor: Grease-like.

Odor Threshold (ppm): Not Determined.

Melting Point: Not Applicable.

Boiling Point: 350°F/177°C

Vapor Pressure (mm Hg at 20°C): Not Applicable.

Solubility in Water: Insoluble.

Coefficient of Water/Oil Solubility: <1

Vapor Density (Air = 1): Not Applicable.

Evaporation Rate (n-BuAc=1): Not Applicable.

V.O.C.: 0%(w/w), 0%(v/v), 0 lbs./gal.(U.S.), 0 kg/l

Section 10

Stability and Reactivity

Chemical Stability: Stable.

Hazardous Polymerization: Will Not Occur.

Conditions to Avoid: Not Applicable.

Chemicals to Avoid: Oxidizers, strong acids, strong alkalis, aromatic solvents, chlorinated solvents.

Hazardous Decomposition Products: Not Determined.

Section 11

Toxicological Information

Sensitization to Product: Not Applicable.

Teratogenicity: Not Applicable.

Irritancy of Product: Not Applicable.

Mutagenicity: Not Applicable.

Reproductive Toxicity: Not Applicable.

Toxicological information regarding individual ingredients, if applicable, may be found in Section 2.

Section 12

Ecological Information

Not Determined.

Section 13

Disposal Considerations

Dispose of in accordance with applicable federal, state, and local regulations.

Section 14

Transport Information

D.O.T. (U.S.)

Proper Shipping Name: Cement or compound, pipefitting, class 55.

Hazard Class or Division: Not Regulated.

Hazard Label: Not Regulated.

I.D. Number: Not Regulated.

TDG (Canada): Not Regulated.

IATA: Not Regulated.

ICAO: Not Regulated.

IMO: Not Regulated.

Australian Code for the Transport of Dangerous Goods

Dangerous Goods Class and Subsidiary Risk:
Not Determined.

Product Name:

SLIC-TITE PASTE with PTFE

Revision #: 1.8

Date Prepared: December 7, 1994

Date Revised: February 20, 2007

Section 15

Regulatory Information

Footnotes for Section 2:

- 1 Subject to the reporting requirements of SARA Title III, Section 313.
- 2 Appears on the California Safe Drinking Water and Toxic Enforcement Act (Prop. 65) Substances List.
- 3 Appears on the Massachusetts Substances List.
- 4 Appears on the New Jersey Right-To-Know Hazardous Substances List.
- 5 Appears on the Pennsylvania Hazardous Substances List.
- 6 Appears on the Canadian WHMIS Ingredient Disclosure List.

U.S.A.

OSHA Hazard Status: This product is not considered to be hazardous as defined by the U.S. OSHA HCS (29 CFR 1910.1200).

EPA SARA sec. 311/312 Hazard Categories: Not Applicable.

Toxic Substances Control Act (TSCA): All ingredients contained in this product are listed on the U.S. EPA TSCA Chemical Substance Inventory.

HMIS Rating: Health 0, Flammability 1, Reactivity 0

NFPA Rating: Health 2, Flammability 1, Reactivity 0

American Gas Association (AGA): Meets AGA requirements 4-90. Working temperature range -40°F to 125°F. Maximum working pressure 125 psi. Use with natural gas and LP gases (vapor state only). Use on steel, galvanized steel, iron, brass, copper and aluminum.

National Sanitation Foundation (NSF): Certified to ANSI/NSF Standard 61.

United States Department of Agriculture (USDA): Authorized by USDA for use in federally inspected meat and poultry plants.

Underwriters Laboratories (U.L.): Classified by U.L. in U.S.A. and Canada.

Meets U.S. Federal Specification TT-S-1732.

CANADA

WHMIS Status: This product is not considered to be hazardous as defined by Canadian WHMIS Controlled Products Regulations.

WHMIS Rating: None.

WHMIS Risk Phrases: None.

WHMIS Precautionary Statements: None.

Domestic Substances List (DSL): All ingredients contained in this product are listed on the Canadian EPA (CEPA) Domestic Substances List (DSL).

E.U.

European Inventory of Existing Chemical Substances (EINECS): All ingredients contained in this product are listed on the European Inventory of Existing Chemical Substances (EINECS).

Categories of Danger (Labeling Information): None.

Risk (R) Phrases: None.

Safety (S) Phrases: None.

AUSTRALIA

Worksafe Australia Status: This product is not classified as hazardous according to criteria of Worksafe Australia.

HAZCHEM Code: None allocated.

Poisons Schedule Number: None allocated.

Further regulatory information regarding individual ingredients, if applicable, may be found in Section 2.

This product has been classified in accordance with the hazard criteria of the U.S. OSHA Hazard Communication Standard, the Canadian WHMIS Controlled Products Regulations, the British CHIP2 regulation 6, and the Australian NMRCWHS. This MSDS contains the information required by the

Product Name:

SLIC-TITE PASTE with PTFE

Revision #: 1-8

Date Prepared: December 7, 1994

Date Revised: February 20, 2007

above regulations and conforms to ANSI Z400.1-1993.

Section 16

Other Information

MSDS Prepared By: Director of Chemical Safety

The information contained herein is based on data available to us and is accurate and reliable to the best of our knowledge and belief. However, LA-CO Industries, Inc. makes no representations as to its completeness or accuracy. Information is supplied on condition that persons receiving such information will make their own determination as to its suitability for their purposes prior to use. In no event will LA-CO Industries, Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information contained herein.

PURPLE PRIMER NSF

SECTION 1

IDENTITY OF MATERIAL

Trade Name: OATEY PURPLE PRIMER NSF
Product Numbers: 530-30755, 530-30756, 530-30757
Formula: Organic Solvents
Synonyms: Methyl Ethyl Ketone, Cyclohexanone, Acetone and Tetrahydrofuran
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>
Oatey Phone Number: (216) 267-7100
Emergency Phone Numbers: For Emergency First Aid call 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300

SECTION 2

COMPOSITION

<u>INGREDIENTS:</u>	<u>%:</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>	<u>OTHER:</u>
Acetone	0 - 1%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	
Cyclohexanone	15 - 20%	108-94-1	25 ppm(skin)	50 ppm	
Tetrahydrofuran	10 - 15%	109-99-9	200 ppm 750 ppm STEL	200 ppm	25 ppm (Mfg)
Methyl Ethyl Ketone	70 - 80%	78-93-3	200 ppm	200 ppm	
Violet Dye (Non-hazardous)	0 - 1%	81-48-1	None Established	None Established	
Red Dye (Non-hazardous)	0 - 1%	4477-79-6	None Established	None Established	

SECTION 3

EMERGENCY OVERVIEW

Purple liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

NFPA Hazard Signal: Health: 2 Stability: 1 Flammability: 3 Special: None
HMIS Hazard Signal: Health: 3 Stability: 1 Flammability: 3 Special: None
OSHA Hazard Classification: Flammable, irritant, organ effects
Canadian WHIMS Classification: Class B, Division 1; Class D, Division 2, Subdivision B

SECTION 4 EMERGENCY AND FIRST AID PROCEDURES - CALL 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.

Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with water for 15 minutes. If irritation persists, seek medical attention.

Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

PURPLE PRIMER NSF

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 0 - 5 Degrees F. / PMCC
Flammability: LEL = 1.8 % Volume, UEL = 11.5 % Volume
Extinguishing: Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Media:
Special Fire: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Fighting Procedure:
Unusual Fire and Explosion: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazards: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Hazardous Decomposition Products:

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 12 for disposal information.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.
VOC Information: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.
VOC Level: 850 g/l per SCAQMD Test Method 316A.

PURPLE PRIMER NSF

SECTION 9 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Skin Protection: Rubber gloves are suitable for normal use of the product. For long exposures product chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Eye Protection: Safety glasses with sideshields or safety goggles.

Other: Eye wash and safety shower should be available.

SECTION 10 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 174 Degrees F / 79 C

Melting Point: N/A

Vapor Pressure: 70 mmHg @ 20 Degrees C

Vapor Density: (Air = 1) 2.5

Volatile Components: 99.96%

Solubility In Water: Negligible

pH: N/A

Specific Gravity: 0.84 +/- 0.02

Evaporation Rate: (BUAC = 1) = 5.5 - 8.0

Appearance: Purple Liquid

Odor: Ether-Like

Will Dissolve In: Organic solvents

Material Is: Liquid

SECTION 11 STABILITY AND REACTIVITY

Stability: Stable.

Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition.

Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Incompatibility/ Materials To Avoid: Oxidizing agents, alkalies, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Polymerization: Will not occur.

SECTION 12 DISPOSAL INFORMATION

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

PURPLE PRIMER NSF

SECTION 13

TOXICOLOGICAL INFORMATION

Inhalation:

Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Skin:

May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Eye:

Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Ingestion:

Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Chronic

Toxicity:

Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.

Toxicity Data:

Acetone:

Oral rat LD50: 5,800 mg/kg

Inhalation rat LC50: 50,100 mg/m³/8 hours

Cyclohexanone:

Oral rat LD50: 1,620 mg/kg

Inhalation rat LC50: 8,000 ppm/4 hours

Skin rabbit LD50: 1 mL/kg

Tetrahydrofuran:

Oral rat LD50: 1,650 mg/kg

Inhalation rat LC50: 21,000 ppm/3 hours

Methyl Ethyl Ketone:

Oral rat LD50: 2,737 mg/kg

Inhalation rat LC50: 23,500 mg/m³/8 hours

Skin rabbit LD50: 6,480 mg/kg

Sensitization:

None of the components are known to cause sensitization.

Carcinogenicity:

None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to Tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health are unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF.

Mutagenicity:

Acetone has been positive in a mammal cell cytogenic analysis but negative in many other assays. At most, acetone is weakly genotoxic. Cyclohexanone has been positive in bacterial and mammalian assays. Tetrahydrofuran was positive in a bacterial assay. Methyl ethyl ketone is not considered genotoxic based on laboratory studies.

Reproductive

Toxicity:

Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran have been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical

Conditions

Aggravated By

Exposure:

Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

PURPLE PRIMER NSF

SECTION 14 TRANSPORTATION INFORMATION

DOT: Less than 1 Liter (0.3 gal) Greater than 1 Liter (0.3 gal)

Proper Shipping Name	Consumer Commodity	Adhesives
Hazard Class/Packing Group	ORM-D	3, PGII
UN/NA Number	None	UN1133
Hazard Labels	None	Flammable Liquid

IMDG

Proper Shipping Name	Adhesives	Adhesives
Hazard Class/Packing Group	3, II	3, II
UN Number	UN1133	UN1133
Label	None (Limited Quantities are excepted from labeling)	Class 3 (Flammable Liquid)

RCRA Hazardous Waste Number: U002, U057, U159, U213

EPA Hazardous Waste ID Number: D001, D035, F003, F005

EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

SECTION 15

REGULATIONS

Hazard Category for Section 311/312: Acute Health, Chronic Health, Flammable

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

Chemical	CAS #	%
Methyl Ethyl Ketone	78-93-3	70-80%

CERCLA 103 Reportable Quantity:

Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Methyl Ethyl Ketone (80% maximum) of 5,000 lbs, is 6,250 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65:

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposures to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. Oatey strongly encourages the use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 9 to minimize exposure to these chemicals.

TSCA Inventory:

All of the components of this product are listed on the TSCA inventory.

SECTION 16 DISCLAIMER

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

REGULAR CLEAR PVC SOLVENT CEMENT

SECTION 1

IDENTITY OF MATERIAL

Trade Name: OATEY REGULAR CLEAR PVC SOLVENT CEMENT
Product Numbers: 31012, 31013, 31014, 5-10, 5-12, 5-14
Formula: PVC Resin in Solvent Solution
Synonyms: PVC Plastic Pipe Cement
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>
Oatey Phone Number: (216) 267-7100
Emergency Phone Numbers: For Emergency First Aid call 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300

SECTION 2

COMPOSITION

<u>INGREDIENTS:</u>	<u>%:</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>	<u>OTHER:</u>
Acetone	0 - 5%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	
Cyclohexanone	5 - 10%	108-94-1	25 ppm(skin)	50 ppm	
Tetrahydrofuran	25 - 40%	109-99-9	200 ppm 750 ppm STEL	200 ppm	25 ppm (Mfg)
Methyl Ethyl Ketone	45 - 60%	78-93-3	200 ppm	200 ppm	
PVC Resin (Non-hazardous)	10 - 16%	9002-86-2	10 mg/m3	15 mg/m3	

SECTION 3

EMERGENCY OVERVIEW

Clear liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.
NFPA Hazard Signal: Health: 2 Stability: 1 Flammability: 3 Special: None
HMIS Hazard Signal: Health: 3 Stability: 1 Flammability: 3 Special: None
OSHA Hazard Classification: Flammable, irritant, organ effects
Canadian WHIMS Classification: Class B, Division 1; Class D, Division 2, Subdivision B

SECTION 4 EMERGENCY AND FIRST AID PROCEDURES - CALL 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with water for 15 minutes. If irritation persists, seek medical attention.
Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.
Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

REGULAR CLEAR PVC SOLVENT CEMENT

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 0 - 5 Degrees F. / PMCC
Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing: Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Media:
Special Fire: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Fighting:
Procedure:
Unusual Fire and Explosion: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazards: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Hazardous
Decomposition
Products:

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 12 for disposal information.
Procedures:

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.
VOC: This product emits VOC's (volatile organic compounds) in its use.
Information: Make sure that use of this product complies with local VOC emission regulations, where they exist.
VOC Level: 550 g/l per SCAQMD Test Method 316A.

REGULAR CLEAR PVC SOLVENT CEMENT

SECTION 9 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Skin Protection: Rubber gloves are suitable for normal use of the product. For long exposures product chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Eye Protection: Safety glasses with sideshields or safety goggles.

Other: Eye wash and safety shower should be available.

SECTION 10 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 151 Degrees F / 66 C

Melting Point: N/A

Vapor Pressure: 145 mmHg @ 20 Degrees C

Vapor Density: (Air = 1) 2.5

Volatile Components: 86-90%

Solubility In Water: Negligible

pH: N/A

Specific Gravity: 0.89 +/- 0.015

Evaporation Rate: (BUAC = 1) = 5.5 - 8.0

Appearance: Clear Liquid

Odor: Ether-Like

Will Dissolve In: Tetrahydrofuran

Material Is: Liquid

SECTION 11 STABILITY AND REACTIVITY

Stability: Stable.

Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition.

Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Incompatibility/ Materials To Avoid: Oxidizing agents, alkalies, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Polymerization: Will not occur.

SECTION 12 DISPOSAL INFORMATION

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

REGULAR CLEAR PVC SOLVENT CEMENT

SECTION 13

TOXICOLOGICAL INFORMATION

Inhalation: Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Skin: May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Eye: Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Ingestion: Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Chronic Toxicity: Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.

Toxicity Data: Acetone: Oral rat LD50: 5,800 mg/kg
Inhalation rat LC50: 50,100 mg/m³/8 hours
Cyclohexanone: Oral rat LD50: 1,620 mg/kg
Inhalation rat LC50: 8,000 ppm/4 hours
Skin rabbit LD50: 1 mL/kg
Tetrahydrofuran: Oral rat LD50: 1,650 mg/kg
Inhalation rat LC50: 21,000 ppm/3 hours
Methyl Ethyl Ketone: Oral rat LD50: 2,737 mg/kg
Inhalation rat LC50: 23,500 mg/m³/8 hours
Skin rabbit LD50: 6,480 mg/kg

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to Tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health are unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF.

Mutagenicity: Acetone has been positive in a mammal cell cytogenic analysis but negative in many other assays. At most, acetone is weakly genotoxic. Cyclohexanone has been positive in bacterial and mammalian assays. Tetrahydrofuran was positive in a bacterial assay. Methyl ethyl ketone is not considered genotoxic based on laboratory studies.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran have been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

REGULAR CLEAR PVC SOLVENT CEMENT

SECTION 14 TRANSPORTATION INFORMATION

DOT Less than 1 Liter (0.3 gal) Greater than 1 Liter (0.3 gal)

Proper Shipping Name:	Consumer Commodity	Adhesives
Hazard Class/Packing Group:	ORM-D	3, PGII
UN/NA Number:	None	UN1133
Hazard Labels:	None	Flammable Liquid

IMDG

Proper Shipping Name:	Adhesives	Adhesives
Hazard Class/Packing Group:	3, II	3, II
UN Number:	UN1133	UN1133
Label:	None (Limited Quantities are excepted from labeling)	Class 3 (Flammable Liquid)

RCRA Hazardous Waste Number: U002, U057, U159, U213

EPA Hazardous Waste ID Number: D001, D035, F005

EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

SECTION 15

REGULATIONS

Hazard Category for Section 311/312: Acute Health, Chronic Health, Flammable

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

<u>Chemical</u>	<u>CAS #</u>	<u>%</u>
Methyl Ethyl Ketone	78-93-3	45-60%

CERCLA 103 Reportable Quantity:

Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (40% maximum) of 1,000 lbs, is 2,500 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65:

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposures to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. Oatey strongly encourages the use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 9 to minimize exposure to these chemicals.

TSCA Inventory:

All of the components of this product are listed on the TSCA inventory.

SECTION 16 DISCLAIMER

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

J-B Weld Company

P.O. Box 483
1130 Como Street
Sulphur Springs, TX 75482
Tel: (903) 885-7696
Fax: (903) 885-5911

SECTION I - IDENTIFICATION OF PRODUCT

PRODUCT NAME: J B WELD EPOXY STEEL HARDENER
PRODUCT CODE: (48008), 48105, 48155, 48171
SYNONYM/CROSS REFERENCE: Epoxy Hardener
SCHEDULE B NUMBER: 3506.91.0000-3

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	WGT%	CAS #	TLV/PEL
Calcium Carbonate	30-40%	1317-65-3	ACGIH TWA 10 mg/m ³ OSHA PEL 15 mppcf
Barium Sulfate	20-30%	7727-43-7	ACGIH TWA 10 mg/m ³ OSHA PEL 2 mppcf
Magnesium Silicate	5-10%	14807-96-6	ACGIH TWA 2 mg/m ³ OSHA PEL 20 mppcf
Titanium Dioxide	1-5%	13463-67-7	ACGIH TWA 10 mg/m ³ OSHA PEL 20 mg/m ³
Zinc Sulfide	0-5%	1314-98-3	ACGIH TLV 10 mg/m ³
Furfuryl Alcohol	1-5%	98-00-0	ACGIH TWA 10 ppm
Polyamide Resin	15-25%	68410-23-1	N/E
Aminophenols	1-5 %	Mixture	N/E

SECTION III - PHYSICAL DATA

APPEARANCE: White Paste
SPECIFIC GRAVITY: 1.78
VAPOR PRESSURE (mmHG): N/Av
BOILING POINT: N/Av
VAPOR DENSITY: Heavier than air
EVAPORATION RATE (Ethyl Ether = 1): Slower than Ethyl Ether
VOLATILES BY WEIGHT: Nil
SOLUBILITY IN WATER: Not Soluble
VOC: Grams/Liter = 72
Lbs/Gallon = 0.6

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT: >200°F/93°C Seta Flash Closed cup

LOWER FLAMMABLE LIMIT %: N/E

UPPER FLAMMABLE LIMIT %: N/E

FIRE EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES: Fight like a fuel oil fire. Cool fire exposed containers with water spray. Firefighter should wear OSHA/NIOSH approved self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARD: Closed containers exposed to high temperatures, such as fire conditions may rupture.

SECTION V - HEALTH HAZARD/TOXICOLOGICAL PROPERTIES

OVEREXPOSURE EFFECTS:

ACUTE EFFECTS:

EYES: Contact with eyes can cause severe irritation, redness, tearing, blurred vision, and/or swelling. May cause eye damage.

SKIN: Contact with skin can cause irritation, (minor itching, burning and/or redness), Dermatitis, defatting may be readily absorbed through the skin.

INHALATION: Inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and/or asphyxiation. Aspiration of material into lungs may result in chemical pneumonitis which can be fatal.

INGESTION: Ingestion can cause gastrointestinal irritation, nausea, vomiting, diarrhea.

CHRONIC EFFECTS:

Overexposure to this material has apparently been known to cause the following effects in lab animals:
Eye damage, skin damage.

CARCINOGEN: YES ☐ NO ☒

TERATOGEN: YES ☐ NO ☒

MUTAGEN: YES ☐ NO ☒

PRIMARY ROUTES OF EXPOSURE: Skin, inhalation

FIRST AID:

INHALATION: If inhaled, remove victim from exposure to a well-ventilated area. Make them comfortably warm, but not hot. Use oxygen or artificial respiration as required. Consult a physician.

SKIN: For skin contact, wash promptly with soap and excess water.

EYES: For eye contact, flush promptly with excess water for at least fifteen minutes. Consult a physician.

INGESTION: If ingested, do not induce vomiting. Give victim a glass of water. Call a physician immediately.

SECTION VI - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Open flames, sparks, heat, electrical and static discharge.

INCOMPATIBILITY MATERIALS TO AVOID: Strong acids, alkalis, oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide, Carbon Monoxide and Carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VII - SPILL AND DISPOSAL PROCEDURE

SPILLS, LEAK OR RELEASE: Ventilate area. Remove all possible sources of ignition. Avoid prolonged breathing of vapor. Contain spill with inert absorbent.

WASTE DISPOSAL: Dispose of in accordance with local, state, and federal regulations.

SECTION VIII - PROTECTION INFORMATION

RESPIRATORY PROTECTION: If component TLV limits are exceeded, use NIOSH/MSHA approved respirator to remove vapors. Use an air-supplied respirator if necessary.

VENTILATION: Use adequate ventilation in volume and pattern to keep TLV/PEL below recommended levels. Explosion-proof ventilation may be necessary.

PROTECTIVE GLOVES: To prevent prolonged exposure use rubber gloves; solvents may be absorbed through the skin

EYE PROTECTION: Safety Glasses or goggles with splash guards or side shields.

OTHER PROTECTIVE EQUIPMENT: Wear protective clothing as required to prevent skin contact.

SECTION IX - HANDLING AND STORAGE PRECAUTIONS

STORAGE AND HANDLING: Use with adequate ventilation. Avoid contact with eyes and skin. Avoid breathing vapors. Do not store the product above 100°F/38°C. Do not flame, cut, braze weld or melt empty containers. Keep the product away from heat, open flame, and other sources of ignition. Avoid contact with strong acids, alkalis and oxidizers.

SECTION X - ADDITIONAL INFORMATION

SHIPPING INFORMATION: Please comply with DOT regulations in USA

HMIS RATING:

Health	2	4 = Extreme
Fire	1	3 = High
Reactivity	1	2 = Moderate
		1 = Slight
		0 = Insignificant

Personal Protection - See Section VIII

CALIFORNIA PROPOSITION 65:

Trace amounts of some chemicals known to the State of California to cause cancer, birth defects or other reproductive harm may be present in this product.

SECTION 313 SUPPLIER NOTIFICATION:

This product contains the following toxic chemicals subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372:

<u>CHEMICAL NAME</u>	<u>CAS</u>	<u>% BY WGT</u>
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NOT APPLICABLE

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS THAT ARE COPIED AND DISTRIBUTED FOR THIS CHEMICAL

ABBREVIATIONS

IARC = International Agency for Research on Cancer
ACGIH = American Conference of Governmental Industrial Hygienists
NIOSH = National Institute of Occupational Safety and Health
TLV = Threshold Limit Value
PEL = Permissible Emission Level
DOT = Department of Transportation
NTP = National Toxicology Program
N/AV = Not Available
N/AP = Not Applicable
N/E = Not Established
N/D = Not Determined

PREPARED FOR:

J-B Weld Company

P.O. Box 483
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Sulphur Springs, TX 75482
Tel: (903) 885-7696
Fax: (903) 885-5911

REVIEWED ON
SUPERSEDES
REVISION

May 17, 2004
June 23, 2003
Format

The information in the Material Safety Data Sheet has been compiled from our experience and from data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of the safety precautions as may be necessary. We reserve the right to revise Material Safety Data Sheets from time to time as new technical information becomes available. The user has the responsibility to contact the Company to make sure that the MSDS is the latest one issued.

J-B Weld Company

P.O. Box 483
1130 Como Street
Sulphur Springs, TX 75482
Tel: (903) 885-7696
Fax: (903) 885-5911

SECTION I - IDENTIFICATION OF PRODUCT

PRODUCT NAME:	JB WELD - EPOXY STEEL RESIN
PRODUCT CODE:	(48009), 48102, 48153, 48170
SYNONYM/CROSS REFERENCE:	Resin Solution
SCHEDULE B NUMBER:	3506.91.0000

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	WGT%	CAS #	TLV/PEL
Calcium Carbonate	40-50%	1317-65-3	ACGIH: TWA 10 mg/m ³ OSHA: PEL 15 mppcf
Iron Powder	10-20%	65997-19-5	ACGIH TLV 15 mg/m ³ OSHA: PEL 15 mppcf
Epoxy Resin	30-40%	25068-38-6	N/E
Aromatic Hydrocarbons	1-5 %	64742-94-5	N/E

SECTION III - PHYSICAL DATA

APPEARANCE: Dark gray or black smooth paste
SPECIFIC GRAVITY: 1.80
VAPOR PRESSURE (mmHG): N/A
BOILING POINT: N/E
VAPOR DENSITY: Heavier than air
EVAPORATION RATE (Ethyl Ether = 1): Slower than Ethyl Ether
VOLATILES BY WEIGHT: N/D
SOLUBILITY IN WATER: Not Soluble
VOC: Grams/Liter = Nil
Lbs/Gallon = Nil



MATERIAL SAFETY DATA SHEET

STRATA Ultimate
Strength
Cleaner/Degreaser with
Inversol

MSDS No: 6271
Date Prepared: 10/10/2003
Date Revised: 10/10/2003

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name/Use: STRATA Ultimate Strength Cleaner/Degreaser with Inversol

MSDS CODE: 3138638

PRODUCT CODE: 627110, 6271520, 6271550

MANUFACTURER

The Ramsey Company
8310 16th St.
Sturtevant, WI 53177-0902

Ramsey Telephone Number: 800-421-2768
Emergency Telephone (24 hours): 800-228-5635
CHEMTREC (U.S./Can.): 800-424-9300
CHEMTREC (Int'l): +1 703-527-3887

2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS#	% BY WEIGHT	OSHA PEL/STEL	ACGIH TLV/STEL
Water	7732-18-5	30 - 60	NA	NA
Sodium xylene sulfonate	1300-72-7	3 - 7	NA	NA
Benzyl alcohol	100-51-6	3 - 7	NA	NA
Sodium hydroxide	1310-73-2	3 - 7	2 mg/m3 / Ceiling	2 mg/m3 / Ceiling
Linear primary alcohol ethoxylate	34398-01-1	3 - 7	NA	NA
Sodium metasilicate	6834-92-0	1 - 5	NA	NA
Diethylene glycol monobutyl ether	112-34-5	3 - 7	NA	NA
Dye	NA	< 0.1	NA	NA

NA - Not Available

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear, Purple Liquid . Mild, Solvent Odor. Causes Eye and Skin Burns. Harmful if Swallowed.

POTENTIAL HEALTH EFFECTS (See Section 11 for Toxicological Information)

PRIMARY ROUTE(S) OF EXPOSURE: ☒ Eye ☒ Skin Contact ☐ Skin Absorption
☒ Inhalation ☒ Ingestion

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Causes eye burns. Symptoms may include pain, tearing, redness, and eye injury.

SKIN: Causes skin burns. Symptoms may include pain, redness, swelling, scarring, and skin damage.

INGESTION: Harmful if swallowed. May cause mouth, throat and stomach burns. Symptoms may include nausea, vomiting, diarrhea, and severe stomach pain. May also cause central nervous system effects including headache, dizziness, and weakness.

INHALATION: High concentrations of vapor or mist may cause nose, throat and respiratory tract irritation. Symptoms may include

STRATA Ultimate Strength Cleaner/Degreaser with Inversol

coughing, wheezing and shortness of breath. High concentrations of vapor or mist may also cause central nervous system effects including headache, dizziness and nausea.

EFFECTS OF CHRONIC EXPOSURE: Prolonged inhalation of high concentrations of concentrated alkaline materials above exposure limits (See Section 2, Composition/Information on Ingredients) can cause respiratory tract injury.

MEDICAL CONDITIONS AGGRAVATED: May aggravate pre-existing eye, skin and respiratory conditions.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water while holding eyelids apart. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Do not put any medication in the victim's eyes unless instructed by a physician. Get immediate medical attention.

SKIN: Immediately flush with plenty of water for at least 15 minutes, then wash with soap and water. Immediately remove contaminated clothing. Get medical attention if irritation develops or persists. Thoroughly wash (or discard) clothing before reuse. Destroy contaminated shoes.

INGESTION: Do not induce vomiting. Rinse mouth out with water. Drink large quantities of water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give respiration; if breathing is difficult, give oxygen (by trained personnel only). Get immediate medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT AND METHOD: > 93°C (200°F)TCC

FLAMMABLE LIMITS: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

EXTINGUISHING MEDIA: Use water fog, dry chemical, CO₂, or foam.

HAZARDOUS COMBUSTION PRODUCTS: Normal products of combustion (carbon monoxide and carbon dioxide), oxides of sulfur and oxides of sodium.

FIRE AND EXPLOSION HAZARDS: None known.

FIRE FIGHTING INSTRUCTIONS: Evacuate area. Cool containers exposed to fire with water. MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear should be worn.

6. ACCIDENTAL RELEASE MEASURES

See Section 8, Exposure Controls/Personal Protection and Section 3, Hazard Identification. Floors may be slippery. Use care to avoid falling. Ventilate spill area. Contain and isolate spill. Keep non-essential personnel from entering spill area. Use mop and absorbent to collect material for proper disposal. Use non-metallic implements for cleaning and collection. Rinse area with water.

7. HANDLING AND STORAGE

HANDLING: Follow label use directions. Do not mix with other chemicals unless instructed by label directions. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Immediately remove contaminated clothing. Wash clothing and equipment before reuse. Destroy contaminated shoes. Empty containers retain residue and may be hazardous (See Section 14, Transport Information.).

STORAGE: Keep container closed when not in use. Store away from incompatible materials. (See Section 10, Stability and Reactivity).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general room ventilation is expected to be adequate. If user operations generate vapor or mist, ventilation should be used to keep airborne concentrations below exposure limits (See Section 2, Composition/Information on Ingredients).

PERSONAL PROTECTION

STRATA Ultimate Strength Cleaner/Degreaser with Inversol

EYE: Where eye contact is possible, wear chemical splash goggles (ANSI Z87.1-approved).

SKIN: Where skin contact is possible, chemical-resistant gloves should be worn. When additional skin contact is possible, other protective equipment and clothing (e.g., footwear) may be needed. All contaminated clothing should be removed immediately and cleaned (or discarded) before reuse.

RESPIRATORY: No respiratory protection is required if general room ventilation is adequate and airborne concentrations are kept below exposure limits. When exposure limits are exceeded, use appropriate respiratory protection (NIOSH/MSHA) to prevent overexposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Mild, Solvent

APPEARANCE: Clear, Purple

pH: 13.5 to 14.0

PERCENT VOLATILE BY WEIGHT: 75

VAPOR PRESSURE: Not Determined

VAPOR DENSITY: Not Determined

BOILING POINT: Not Determined

FREEZING/MELTING POINT: Not Determined

SOLUBILITY IN WATER: Complete

EVAPORATION RATE: Not Determined

SPECIFIC GRAVITY: 1.14

VISCOSITY: Water Thin

OCTANOL/WATER PARTITION COEFFICIENT: Not Determined

ODOR THRESHOLD: Not Determined

10. STABILITY AND REACTIVITY

STABILITY (CONDITIONS TO AVOID): Stable.

POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: None.

INCOMPATIBLE MATERIALS: Oxidizers (e.g., bleach), strong acids (e.g., hydrochloric acid) and reactive metals (e.g., aluminum).

11. TOXICOLOGICAL INFORMATION

ACUTE DATA: This product is expected to be corrosive to the eyes and skin due to its high alkalinity. The following data are available for product ingredients:

<u>PRODUCT/INGREDIENT</u>	<u>ORAL LD₅₀ (rat)</u>	<u>DERMAL LD₅₀ (rabbit)</u>	<u>INHALATION LC₅₀ (rat)</u>
Water			
Sodium xylene sulfonate	650 - 4000 mg/kg	3000 mg/kg	Not Available
Benzyl alcohol	1230 mg/kg	2000 mg/kg	1000 ppm (8-hr)
Sodium hydroxide	Not Available	1350 mg/kg	Not Available
Linear primary alcohol ethoxylate	700 - 1700 mg/kg	>2000 mg/kg	Not Available
Sodium metasilicate	600 - 1153 mg/kg	Not Available	Not Available
Diethylene glycol monobutyl ether	5660 mg/kg	4120 mg/kg	Not Available
Dye	Not Available	Not Available	Not Available

SENSITIZATION DATA: No data available.

CHRONIC DATA:

Repeated inhalation of high concentrations of alkaline materials has been reported to cause impairment of lung function with shortness of breath, chemical pneumonia and pulmonary edema. Prolonged overexposure to benzyl alcohol by ingestion and inhalation has caused central nervous system effects in humans and laboratory animals.

REPRODUCTIVE/TERATOGENIC DATA: No data available.

STRATA Ultimate Strength Cleaner/Degreaser with Inversol

CARCINOGENIC/MUTAGENIC DATA: Not listed as carcinogenic by NTP, IARC, or ACGIH or regulated as a carcinogen by OSHA.

SYNERGISTIC MATERIALS: No data available.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATIONS

Disposal of this material should be in accordance with local, state or provincial and federal regulations. The unused product, as manufactured, is a RCRA hazardous waste (Corrosive-D002) in accordance with 40 CFR 261. The product has not been evaluated by the Toxicity Characteristic Leachate Procedure (TCLP). According to RCRA, it is the responsibility of the waste generator to ensure proper disposal.

14. TRANSPORT INFORMATION

DOT/TDG HAZARDOUS MATERIAL DESCRIPTION: Corrosive liquid, basic, inorganic, n.o.s.

DOT/TDG TECHNICAL NAME: Sodium metasilicate, sodium hydroxide

DOT/TDG HAZARD CLASS: 8

UN ID No./P.I.N. No.: 3266

DOT/TDG PACKING GROUP: II

NAERG: 154

15. REGULATORY INFORMATION

Not meant to be all-inclusive---selected regulations represented.

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Under 40 CFR 370.2, this product meets the following hazard categories: Immediate, Delayed.

313 REPORTABLE INGREDIENTS: Diethylene glycol monobutyl ether is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 under the chemical category Glycol Ethers.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Not reportable under CERCLA.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: This product complies with all TSCA inventory requirements.

CANADA

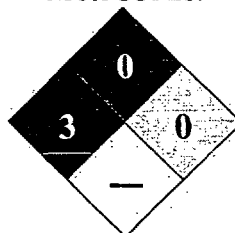
WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): Class E- Corrosive material. This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

HMIS RATING

HEALTH	*	3
FLAMMABILITY		0
REACTIVITY		0
PERSONAL PROTECTION		-

NFPA CODES:



APPROVED BY: Product Safety & Regulatory

MSDS STATUS Revision #: 2

This MSDS replaces the June 18, 1999 MSDS. Any changes in information are as follows:

STRATA Ultimate Strength Cleaner/Degreaser with Inversol

In Section 1

Approved by Product Code Date Prepared [] Print CHEMTREC Phone Number

The information on this data sheet represents our current data and best opinion as to the proper use in handling of the product under normal foreseeable conditions. Any use of this product which is not in conformance with this data sheet or product label, or which involves using the product in combination with any other product or any other process is the responsibility of the user.

MATERIAL SAFETY DATA SHEET

JohnsonDiversey

Clean is just the beginning



Windex Powerized Glass Cleaner (RTU)

HMIS		NFPA	Personal protective equipment
Health	0	0	None / Aucune / Ninguno
Fire Hazard	1	1	
Reactivity	0	0	

Version Number: 5

Preparation date: 2006-05-18

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Windex Powerized Glass Cleaner (RTU)

MSDS #: 126011004

Product code: 94123, 90122, 90139, 90135, 90940, 3694044, 3694052

Recommended use: Industrial/Institutional. Cleaning product.

Manufacturer, importer, supplier:
Consumer Branded Professional Products
JohnsonDiversey, Inc.
8310 16th Street
Sturtevant, Wisconsin 53177-0902
Phone: (888) 352-2249

Emergency telephone number: 1-800-851-7145 (Prosar); 1-651-917-6133 (Int'l Prosar); 01-800-710-3400 (México)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

The product contains no substances which at their given concentration, are considered to be hazardous to health

Principle routes of exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Eye contact: None known.

Skin contact: None known.

Inhalation: None known.

Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral - Rat	LD50 Dermal - Rabbit	LC50 Inhalation - Rat
Isopropyl alcohol	67-63-0	1 - 5%	= 4396 mg/kg	= 12800 mg/kg	= 72.6 mg/L (4h)

4. FIRST AID MEASURES

Eye contact: Rinse with plenty of water.

Skin contact: Rinse with plenty of water.

Inhalation: No specific first aid measures are required.

Ingestion: No specific first aid measures are required.

Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, water spray, foam, carbon dioxide.

Specific hazards: Although this product has a flash point below 200 Deg. F, it is an aqueous solution containing an alcohol and does not sustain combustion.

Unusual hazards: None known

Specific methods: No special methods required

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Extinguishing media which must not be used for safety reasons: None.

6. ACCIDENTAL RELEASE MEASURES

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Environmental precautions and clean-up methods:

Use personal protective equipment
Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

7. HANDLING AND STORAGE

Handling:

Avoid contact with eyes. COMBUSTIBLE LIQUID AND VAPOR. Keep away from open flames, hot surfaces and sources of ignition. Handle in accordance with good industrial hygiene and safety practice. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

Storage:

Keep tightly closed in a dry, cool and well-ventilated place. Protect from freezing. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:

No special ventilation requirements. General room ventilation is adequate.

Personal Protective Equipment

Eye protection:	No special requirements under normal use conditions
Hand protection:	No special requirements under normal use conditions
Skin and body protection:	No special requirements under normal use conditions
Respiratory protection:	No special requirements under normal use conditions
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Isopropyl alcohol	67-63-0	400 ppm (STEL) 200 ppm (TWA)	400 ppm (TWA) 980 mg/m ³ (TWA)	500 ppm (STEL) 1225 mg/m ³ (STEL) 980 mg/m ³ (TWA) 400 ppm (TWA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid	Bulk density:	No information available
pH:	11.45	Dilution pH:	No information available.
Appearance:	Liquid	Vapor density:	No information available
Color:	Blue	Evaporation Rate	No information available
Odor:	Ammoniacal	Boiling point/range:	Not determined
Specific gravity:	0.996	Melting point/range:	Not determined
Density:	8.31 lbs/gal	Decomposition temperature:	Not determined
VOC:	3.8% *	Autoignition temperature:	No information available
Flash point:	131 (°F) 55 (°C)	Partition coefficient (n-octanol/water):	No information available
Solubility:	Soluble	Solubility in other solvents:	No information available
Viscosity:	No information available	Elemental Phosphorus:	0 %P

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Stability:	The product is stable
Polymerization:	Hazardous polymerization does not occur
Hazardous decomposition products:	None reasonably foreseeable.
Conditions to avoid:	Do not freeze.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	Oral LD50 estimated to be greater than 5000 mg/kg. Dermal LD50 estimated to be > 2000 mg/kg.
Component Information:	See Section 3
Chronic toxicity:	None known
Specific effects	
Carcinogenic effects:	None known
Mutagenic effects:	None known
Reproductive toxicity:	None known
Target organ effects:	None known

11. TOXICOLOGICAL INFORMATION**HAZARDOUS COMPONENTS**

Ingredient(s)	CAS #	NTP	IARC	OSHA
Isopropyl alcohol	67-63-0		3	X

12. ECOLOGICAL INFORMATION

Environmental Information: No data available

13. DISPOSAL CONSIDERATIONS**Waste from residues / unused products:**

Dispose of according to all federal, state and local applicable regulations

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information

15. REGULATORY INFORMATION**International Inventories**

All components of this product are listed on the following inventories: U.S.A. (TSCA).

U.S. Regulations

California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65

STATE RIGHT TO KNOW

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Isopropyl alcohol	67-63-0	X	X	X	X
Water	7732-18-5	-	-	-	-

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Isopropyl alcohol	67-63-0	1 - 5%			X

SARA 311/312 Hazard Categories

Immediate: N
Delayed: N
Fire: Y
Reactivity: N
Sudden Release of Pressure: N

Canada

WHMIS hazard class: Not for sale in Canada.

Ingredient(s)	CAS #	NPRI
Isopropyl alcohol	67-63-0	X

16. OTHER INFORMATION

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice: None

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

FEDERAL SPECIFICATIONS, PROMULGATED BY GSA -- GLASS CLEANER LIQUID -- 7930-00-664-6910

===== Product Identification =====

Product ID:GLASS CLEANER LIQUID
MSDS Date:01/01/1987
FSC:7930
NIIN:00-664-6910
MSDS Number: BFKRQ
=== Responsible Party ===
Company Name:FEDERAL SPECIFICATIONS, PROMULGATED BY GSA
City:WASHINGTON
State:DC
Country:US
Emergency Phone Num:713-527-9561
CAGE:81348
=== Contractor Identification ===
Company Name:FEDERAL SPECIFICATIONS, PROMULGATED BY GSA
Box:City:WASHINGTON
State:DC
Country:US
CAGE:81348

===== Composition/Information on Ingredients =====

Ingred Name:ETHYLENE GLYCOL MONOBUTYL ETHER
CAS:622-08-2
RTECS #:KJ7550000
Fraction by Wt: 6%
ACGIH TLV:50PPM

Ingred Name:ISOPROPYL ALCOHOL (SARA III)
CAS:67-63-0
RTECS #:NT8050000
Fraction by Wt: 4%
OSHA PEL:400 PPM/500 STEL
ACGIH TLV:400 PPM/500STEL;9192

Ingred Name:LIQUID NONIONIC SUFACTANT
CAS:59-52-9
RTECS #:UB2625000
Fraction by Wt: <1%

Ingred Name:AMMONIUM HYDROXIDE (SARA III)
CAS:1336-21-6
RTECS #:BQ9625000
Fraction by Wt: <1%
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

===== Hazards Identification =====

Effects of Overexposure:HEADACHES, NAUSEA, DIZZINESS.

===== First Aid Measures =====

First Aid:CONTACT PHYSICIAN.EYES:FLUSH WITH WATER.SKIN:REMOVE
CONTAMINATED CLOTHING,FLUSH SKIN WITH WATER.INHALATION:REMOVE TO

FRESH AIR.

===== Fire Fighting Measures =====

Flash Point:126F,55C
Extinguishing Media:CARBON DIOXIDE,CO*2, DRY CHEMICAL,CARBON
TETRACHLORIDE

===== Accidental Release Measures =====

Spill Release Procedures:SOAK UP WITH ABSORBENT MATERIALS.FLUSH AREA
WITH WATER.

===== Handling and Storage =====

Handling and Storage Precautions:STORE IN CLOSED CONTAINERS OR TANKS.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:NONE
Ventilation:LOCAL EXHAUST
Protective Gloves:REQUIRED
Eye Protection:REQUIRED
Supplemental Safety and Health

===== Physical/Chemical Properties =====

HCC:F4
Boiling Pt:B.P. Text:180F,83C
Vapor Pres:<1
Vapor Density:>AIR
Spec Gravity:0.9982
Evaporation Rate & Reference:1CC/60 HRS
Solubility in Water:COMPLETELY

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES
OXIDIZING MATERIALS
Hazardous Decomposition Products:CO,CO*2

===== Disposal Considerations =====

Waste Disposal Methods:INCINERATE IN APPROPRIATE EQUIPMENT.DISPOSE OF
AS ORDINARY WASTE.

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assume responsibility for the suitability of this information to their
particular situation.

SPACE CHEMICAL INC -- STAR GLASS CLEANER RTU -- 7930-00-184-9423

===== Product Identification =====

Product ID:STAR GLASS CLEANER RTU
MSDS Date:05/10/1994
FSC:7930
NIIN:00-184-9423
MSDS Number: BZSTC
=== Responsible Party ===
Company Name:SPACE CHEMICAL INC
Address:RD 2 BOX 187-A
Box:1228
City:INDIANA
State:PA
ZIP:15701
Country:US
Info Phone Num:814-743-6630/800-255-3924
Emergency Phone Num:800-255-3924/814-743-6630
Preparer's Name:ANGELA COCHRAN
CAGE:IO406

=== Contractor Identification ===

Company Name:SPACE CHEMICAL INC
Box:1228
City:INDIANA
State:PA
ZIP:15701
Country:US
Phone:814-743-6630
CAGE:IO406
Company Name:SPACE CHEMICAL INC.
Address:RD 2 BOX 187-A
Box:City:CHERRY TREE
State:PA
ZIP:15724
Country:US
Phone:814-743-6630
CAGE:OC3Y2

===== Composition/Information on Ingredients =====

Ingred Name:ISOPROPANOL (ISOPROPYL ALCOHOL), 2-PROPANOL, DIMETHYL
CARBINOL(PH = 8.5 +/- 0.50)
CAS:67-63-0
RTECS #:NT8050000
Fraction by Wt: 2.75%
Other REC Limits:STEL 500 PPM
OSHA PEL:400 PPM
ACGIH TLV:400 PPM/

===== Hazards Identification =====

Routes of Entry: Inhalation:NO Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:EYES: SLIGHT BURNING SENSATION. EYE &
MUCOUS MEMBRANE IRRITATION.
Explanation of Carcinogenicity:NONE
Effects of Overexposure:NARCOSIS, IRRITATION, DRYNESS OF SKIN, BURNING
SENSATION

===== First Aid Measures =====

First Aid:SKIN: WASH W/SOAP & WATER. INGESTION: DON'T INDUCE VOMITING.
EYES: FLOOD W/WATER FOR 15 MINS. OBTAIN MEDICAL ATTENTION IN ALL
CASES.

===== Fire Fighting Measures =====

Flash Point Method:COC
Flash Point:NONE TO I.B.P
Lower Limits:2.0
Upper Limits:12.0 @ 77F
Extinguishing Media:WATER, CO2, DRY FOAM
Fire Fighting Procedures:USE SELF CONTAINED BREATHING APPARATUS.

===== Accidental Release Measures =====

Spill Release Procedures:FLUSH W/WATER THROUGH NORMAL SEWAGE SYSTEM.

===== Handling and Storage =====

Handling and Storage Precautions:KEEP FROM HIGH HEAT & OPEN FLAME. KEEP
OUT OF REACH OF CHILDREN. USE PRODUCT ACCORDING TO DIRECTIONS.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:RESPIRATOR
Ventilation:MECHANICAL (GENERAL)
Protective Gloves:RUBBER
Eye Protection:GLASSES
Other Protective Equipment:APRON, EYE WASH STATION
Work Hygienic Practices:REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE
REUSE.
Supplemental Safety and Health
NK

===== Physical/Chemical Properties =====

Boiling Pt:B.P. Text:195F
Melt/Freeze Pt:M.P/F.P Text:128F
Vapor Pres:96
Spec Gravity:<1
pH:8-9
Evaporation Rate & Reference:(BU ACETATE=1): 2.3
Solubility in Water:COMPLETE
Appearance and Odor:RED IN COLOR W/SLIGHT AMMONIA ODOR. WATERLIKE
VISCOSITY

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES
ACIDS, OXIDIZERS, CAUSTICS
Stability Condition to Avoid:HIGH HEAT, OPEN FLAMES

===== Disposal Considerations =====

Waste Disposal Methods:RENDER CONTAINER USELESS. DISPOSE OF IN
ACCORDANCE W/LOCAL, STATE & FEDERAL REGULATIONS.

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View Section : 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

(N/A)

Product Name: **General Purpose Detergent (Liquid Nonionic)**
 Manufacturer Name: LHB Industries
 Address: 10440 Trenton Ave.
 St. Louis, Mo 63132

NFPA

Product Description: Product ID: General Purpose Detergent (Liquid Nonionic)

1
1 0

Business Phone: (314) 423-4333

CHEMTREC Numbers:

For emergencies in the US, call CHEMTREC: 800-424-9300


Revision Date: December 4, 2003
 REVISION NUMBER: 02

Specification: MIL-D-16791G, Type I
 National Stock Number: 7930-00-282-9699, 7930-00-985-6911, 7930-00-282-9700
 CAGE Code: 1A864
 Contract Number: GS-07F-R0002

Product Codes: 1064006, 1064007, 1064008, 1062116

HMIS


HEALTH	1
FIRE	1
REACTIVITY	0
PPE	

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SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS

: (N/A)

Ingredient Name	CAS#	Ingredient Percent
Nonylphenoxypolyethoxy ethanol	9016-45-9	100% (Max) by Weight
OSHA PEL TWA:	Not Established	
ACGIH TLV TWA:	Not Established	
EC Index Number:	1	
	Vapor Pressure (mm Hg 20 deg C): < 1	

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SECTION 3 : HAZARDS IDENTIFICATION

: (N/A)

Nonylphenoxypolyethoxy ethanol :

Route of Exposure: Exposure may be by INGESTION, INHALATION and/or SKIN or EYE contact, depending on conditions of use. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment.


Potential Health Effects:

Eye Contact: May cause irritation, experienced as mild discomfort and seen as slight excess redness of the eye.

Skin Contact: Brief contact may cause slight irritation. Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort, seen as local redness or swelling.

Inhalation: Vapors or mist, in excess of permissible concentrations, or in unusually high


	concentrations generated from spraying or heating the material or as from exposure in poorly ventilated areas or confined spaces, may cause irritation of the nose and throat, headaches, nausea, and drowsiness.
Ingestion:	May cause abdominal discomfort, nausea, and diarrhea.
Aggravation of Pre-Existing Conditions:	There is no evidence that this product aggravates an existing medical condition.

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SECTION 4 : FIRST AID MEASURES

: (N/A)

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Get medical attention.
Skin Contact:	Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists.
Inhalation:	If irritation, headache, nausea, or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or respiratory irritation persists.
Ingestion:	If patient is conscious and can swallow, give two glasses of water. Induce vomiting as directed by medical personnel. Do not induce vomiting or give anything by mouth to an unconscious or convulsing person.

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SECTION 5 : FIRE FIGHTING MEASURES

: (N/A)

Flash Point:	237.8 deg C
Flash Point Method:	PMCC
Upper Flammable or Explosive Limit:	Not determined
Lower Flammable or Explosive Limit:	Not determined
Extinguishing Media:	Use water spray, dry chemical, foam, or carbon dioxide to extinguish flames. Use water spray to cool fire-exposed container. Water or foam may cause frothing.
Protective Equipment:	Water may be used to keep fire-exposed containers cool. Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA


Health: 1

Flammability: 1

Reactivity: 0

Other:


HMIS CLASSIFICATION: HEALTH 1, FLAMMABILITY 1, REACTIVITY 0

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SECTION 6 : ACCIDENTAL RELEASE MEASURES

: (N/A)


Personal Precautions:	PERSONAL PRECAUTIONARY MEASURES: Read entire label before using and follow all label directions.
Spill Cleanup Measures:	Wipe, scrape or soak up contents in an inert material. Pick up spill for recovery or disposal and place in a closed container. Dispose of in accordance with applicable Federal, State & Local regulations.
Environmental Precautions:	Wipe, scrape or soak up contents in an inert material. Pick up spill for recovery or disposal and place in a closed container. Dispose of in accordance with applicable Federal, State & Local regulations.

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SECTION 7 : HANDLING and STORAGE

: (N/A)


Handling:	Keep out of reach of children. Do not take internally. Do not consume food, drink or smoke while handling this product.
Storage:	Keep from freezing. Avoid storage in high temperatures or near open flame. Store in dry cool place.

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SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION

: (N/A)


Engineering Controls:	Local Exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.
Skin Protection Description:	Impervious clothes to protect skin. Wash promptly when skin becomes contaminated.
Hand Protection Description:	GLOVES: Wear chemical resistant gloves to avoid skin contact.
Eye/Face Protection:	Safety glasses with side shields or chemical goggles.
Respiratory Protection:	If personal exposure cannot be controlled to below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
Other Protective:	Use only with adequate ventilation. Avoid contact with skin and eyes. Wash hands after using.

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SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

: (N/A)


Color:	Colorless
Odor:	Slight
Physical State:	Liquid
pH:	7
Vapor Pressure:	< 1 mmHg @ 20 deg C
Solubility:	IN WATER: > 10%
Specific Gravity:	1.06
Density:	8.84 lb/gal
Evaporation Point:	Slower than ether
Volatile Organic Compound Content:	< 1% by wt. (ASTM D 2369) < 0.09 lbs/gal

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SECTION 10 : STABILITY and REACTIVITY

: (N/A)

Chemical Stability:	Stable.
Conditions to Avoid:	Freezing and extreme heat.
Incompatibilities with Other Materials:	Materials to Avoid: None.
Hazardous Polymerization:	Will not occur.
Hazardous Decomposition Products:	Toxic levels of carbon monoxide, carbon dioxide, irritating aldehydes and ketones may be formed on burning. Heating in air may produce irritating aldehydes, acids, and ketones.

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SECTION 11 : TOXICOLOGICAL INFORMATION

: (N/A)


Nonylphenoxypolyethoxy ethanol :

Skin Effects:	(Animal Toxicity Data): Dermal: LD50 > 2.00 g/kg (rabbit) practically non-toxic
---------------	--

Ingestion Effects: (Animal Toxicity Data):
Oral: LD50 3.31 g/kg (rat) slightly toxic

Inhalation Effects: (Animal Toxicity Data):
Inhalation: Believed to be practically non-toxic


Irritation: IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES):
Eyes: (Draize) 14.40/110 (rabbit) slightly irritating
Skin: (Draize) 1.04/8.0 (rabbit) slightly irritating

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SECTION 12 : ECOLOGICAL INFORMATION

: (N/A)


Effect of Material On Aquatic Life: Aquatic Toxicity: LC50-96hr Aquatic toxicity rating is believed to be > 1.00 - 10.00 ppm (moderately toxic)

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SECTION 13 : DISPOSAL CONSIDERATIONS

: (N/A)

Waste Disposal: Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

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SECTION 14 : TRANSPORT INFORMATION

: (N/A)

DOT Shipping Information: U.S. DOT 49 CFR 172.101 Hazardous Material Table
DOT STATUS: Not regulated

DOT Shipping Name: Not Applicable

DOT UN Number: Not Applicable

DOT Hazard Class: Not Applicable

DOT Packing Group: Not Applicable


IATA: IATA: List of Dangerous Goods

IATA Shipping Name: Not regulated

IATA Hazard Class: DIVISION: Not Applicable

IATA UN Number: Identification Number: Not Applicable

IATA Packing Group: Not Applicable

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SECTION 15 : REGULATORY INFORMATION

: (N/A)

Nonylphenoxypolyethoxy ethanol :


TSCA 8(b): Inventory Status: All chemicals in this product are listed, or are exempt from listing on the TSCA Inventory.

Section 302: SARA SECTION 302: Residual ethylene oxide, 75-21-8, 0.001%

Section 313 Toxic Release Form: SARA 313 CHEMICALS: Glycol ethers (fraction of product meeting EPA definition), 1.00-2.99%

OSHA 29 CFR 1200: This MSDS has been prepared in accordance with FED-STD-313D and meets the requirements of 29 CFR 1910.1200.

State: CALIFORNIA PROPOSITION 65: Residual ethylene oxide
VOC CONTENT: < 1% by wt. (ASTM D 2369)
< 0.09 lbs/gal

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SECTION 16 : ADDITIONAL INFORMATION

: (N/A)

HMIS:

Health Hazard:

1

Fire Hazard: 1
Reactivity: 0
NFPA:
Health: 1
Fire Hazard: 1
Reactivity: 0

MSDS Revision Date: December 4, 2003
REVISION NUMBER: 02


MSDS Author: Prepared by: Mark Epstein, R&D Manager

Disclaimer:

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ADDITIONAL INFORMATION: This MSDS has been prepared in accordance with FED-STD-313D and meets the requirements of 29 CFR 1910.1200.

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ITEM: 3UP37 - CLEANER/DEGREASER 5 G

PICK REQ: 1021573759

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A7213

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A7213

A. ed Grainger Item: 3UP37 - CLEANER/DEGREASER 5 G

MATERIAL SAFETY DATA SHEET: CRYSTAL SIMPLE GREEN(R*)

I. PRODUCT & COMPANY INFORMATION

PRODUCT NAME: CRYSTAL SIMPLE GREEN(R*)

OTHER NAMES:
CRYSTAL SIMPLE GREEN(R*) - SPECIALIZED CLEANER/DEGREASER
SIMPLE GREEN SAFETY TOWELS (FLUID ONLY)COMPANY NAME:
SUNSHINE MAKERS, INC.
15922 PACIFIC COAST HIGHWAY
HUNTINGTON HARBOUR, CA 92649
USA
TELEPHONE:
800-228-0709
562-795-6000
FAX: 562-592-3034
WEBSITE: WWW.SIMPLEGREEN.COM

VERSION NO.: 4009

ISSUE DATE: JUNE 10, 2004

FOR 24-HOUR EMERGENCY, CALL CHEM-TEL, INC.: 800-255-3924

USE OF PRODUCT:
A SPECIALIZED CLEANER AND DEGREASER FOR USE IN THE INDUSTRIAL AND INSTITUTIONAL WORKPLACE..

II. INGREDIENT INFORMATION

THE ONLY INGREDIENT OF CRYSTAL SIMPLE GREEN(R*) WITH ESTABLISHED EXPOSURE LIMITS IS UNDILUTED 2-BUTOXYETHANOL (<6%) (BUTYL CELLOSOLVE; CAS NO. 111-76-2). THE OSHA PEL AND ACGIH TLV IS 25 PPM (SKIN). NOTE, HOWEVER, THAT BUTYL CELLOSOLVE IS ONLY ONE OF THE RAW MATERIAL INGREDIENTS THAT UNDERGO PROCESSING AND DILUTION DURING THE MANUFACTURE OF CRYSTAL SIMPLE GREEN(R*). UPON COMPLETION OF THE MANUFACTURING PROCESS, CRYSTAL SIMPLE GREEN(R*) DOES NOT POSSESS THE OCCUPATIONAL HEALTH RISKS ASSOCIATED WITH EXPOSURE TO UNDILUTED BUTYL CELLOSOLVE. VERIFICATION OF THIS IS CONTAINED IN THE INDEPENDENT TEST RESULTS DETAILED UNDER "TOXICOLOGICAL INFORMATION" IN SECTION VII OF THIS MSDS.

BUTYL CELLOSOLVE IN CRYSTAL SIMPLE GREEN(R*) IS PART OF A CHEMICAL (GLYCOL ETHERS) REGULATED BY THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (SARA, TITLE III, SECTION 313); THEREFORE, A REPORTING REQUIREMENT EXISTS. BASED UPON CHEMICAL ANALYSIS, CRYSTAL SIMPLE GREEN(R*) CONTAINS NO KNOWN EPA PRIORITY POLLUTANTS, HEAVY METALS, OR CHEMICALS LISTED UNDER RCRA, CERCLA, OR CWA. ANALYSIS BY TCLP (TOXICITY CHARACTERISTIC LEACHING PROCEDURE) ACCORDING TO RCRA REVEALED NO TOXIC ORGANIC OR INORGANIC CONSTITUENTS.

ALL COMPONENTS OF CRYSTAL SIMPLE GREEN(R*) ARE LISTED ON THE TSCA CHEMICAL SUBSTANCE INVENTORY.

III. HAZARDS IDENTIFICATION

NJ TRADE SECRET REGISTRATION NUMBERS:

80100235-5000P
80100235-5001P
80100235-5002P
80100235-5003P
80100235-5004P
80100235-5005P
80100235-5006P
80100235-5007P
80100235-5008P
80100235-5009P

UN NUMBER: NOT REQUIRED

DANGEROUS GOODS CLASS: NONHAZARDOUS

HAZARD RATING (NFPA/HMIS):

HEALTH = 1*
FIRE = 0
REACTIVITY = 0
SPECIAL = 0

RATING SCALE:

0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE

MILD EYE IRRITANT, NON-MUTAGENIC AND NON-CARCINOGENIC. NONE OF THE INGREDIENTS IN CRYSTAL SIMPLE GREEN(R) ARE REGULATED OR LISTED AS POTENTIAL CANCER AGENTS BY FEDERAL OSHA, NTP, OR IARC.

IV. FIRST AID MEASURES

OF OVEREXPOSURE AND FIRST AID TREATMENT:

E. EYE CONTACT:
REDDENING MAY DEVELOP. IMMEDIATELY RINSE THE EYE WITH LARGE QUANTITIES OF COOL WATER; CONTINUE 10-15 MINUTES OR UNTIL THE MATERIAL HAS BEEN REMOVED; BE SURE TO REMOVE CONTACT LENSES, IF PRESENT, AND TO LIFT UPPER AND LOWER LIDS DURING RINSING. GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

SKIN CONTACT:

MINIMAL EFFECTS, IF ANY; RINSE SKIN WITH WATER, RINSE SHOES AND LAUNDRY CLOTHING BEFORE REUSE. REVERSIBLE REDDENING MAY OCCUR IN SOME DERMAL-SENSITIVE USERS; THOROUGHLY RINSE AREA AND GET MEDICAL ATTENTION IF REACTION PERSISTS.

SWALLOWING:

ESSENTIALLY NON-TOXIC. GIVE SEVERAL GLASSES OF WATER TO DILUTE; DO NOT INDUCE VOMITING. IF STOMACH UPSET OCCURS, CONSULT PHYSICIAN.

INHALATION:

NON-TOXIC. EXPOSURES TO CONCENTRATE-MIST MAY CAUSE MILD IRRITATION OF NASAL PASSAGES OR THROAT; REMOVE TO FRESH AIR. GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

V. FIRE FIGHTING MEASURES

CRYSTAL SIMPLE GREEN(R*) IS STABLE, NOT FLAMMABLE, AND WILL NOT BURN.

FLASH POINT/AUTO-IGNITION: NOT FLAMMABLE.

FLAMMABILITY LIMITS: NOT FLAMMABLE.

EXTINGUISHING MEDIA:

NOT FLAMMABLE/NONEXPLOSIVE. NO SPECIAL PROCEDURES REQUIRED.

SPECIAL FIRE FIGHTING PROCEDURES: NONE REQUIRED.

VI. ACCIDENTAL RELEASE MEASURES

RECOVER USABLE MATERIAL BY CONVENIENT METHOD; RESIDUAL MAY BE REMOVED BY WIPE OR WET MOP. IF NECESSARY, UNRECOVERABLE MATERIAL MAY BE WASHED TO DRAIN WITH LARGE QUANTITIES OF WATER.

VII. HANDLING, STORAGE & TRANSPORT INFORMATION

NO SPECIAL PRECAUTIONS ARE REQUIRED. THIS PRODUCT IS NON-HAZARDOUS FOR STORAGE AND TRANSPORT ACCORDING TO THE U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS. CRYSTAL SIMPLE GREEN(R*) REQUIRES NO SPECIAL LABELING OR PLACARDING TO MEET U.S. DEPARTMENT OF TRANSPORTATION REQUIREMENTS.

UN NUMBER: NOT REQUIRED

DANGEROUS GOODS CLASS: NONHAZARDOUS

VIII. EXPOSURE CONTROLS

EXPOSURE LIMITS:

THE CRYSTAL SIMPLE GREEN(R*) FORMULATION PRESENTS NO HEALTH HAZARDS TO THE USER WHEN USED ACCORDING TO LABEL DIRECTIONS FOR ITS INTENDED PURPOSES. MILD SKIN AND EYE IRRITATION IS POSSIBLE (PLEASE SEE EYE CONTACT AND SKIN CONTACT IN SECTION IV.).

VENTILATION:

NO SPECIAL VENTILATION IS REQUIRED DURING USE. LARGE-SCALE USES INDOORS SHOULD PROVIDE AN INCREASED RATE OF AIR EXCHANGE.

HUMAN HEALTH EFFECTS OR RISKS FROM EXPOSURE:

ADVERSE EFFECTS ON HUMAN HEALTH ARE NOT EXPECTED FROM CRYSTAL SIMPLE GREEN(R*) BASED UPON TWENTY YEARS OF USE OF SIMPLE GREEN WITHOUT REPORTED ADVERSE HEALTH INCIDENCE IN DIVERSE POPULATION GROUPS, INCLUDING EXTENSIVE USE BY INMATES OF U.S. FEDERAL PRISONS IN CLEANING OPERATIONS.

CRYSTAL SIMPLE GREEN(R*) IS A MILD EYE IRRITANT; MUCCOUS MEMBRANES MAY BECOME IRRITATED BY CONCENTRATE-MIST.

CRYSTAL SIMPLE GREEN(R*) IS NOT LIKELY TO IRRITATE THE SKIN IN THE MAJORITY OF USERS. REPEATED DAILY APPLICATION TO THE SKIN WITHOUT RINSING, OR CONTINUOUS CONTACT OF CRYSTAL SIMPLE GREEN(R*) ON THE SKIN MAY LEAD TO TEMPORARY, BUT REVERSIBLE, IRRITATION.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

NO AGGRAVATION OF EXISTING MEDICAL CONDITIONS IS EXPECTED; DERMAL-SENSITIVE USERS MAY REACT TO DERMAL CONTACT BY CRYSTAL SIMPLE GREEN(R*).

IX. PERSONAL PROTECTION

PRECAUTIONARY MEASURES: NO SPECIAL REQUIREMENTS UNDER NORMAL USE CONDITIONS.

EYE PROTECTION:

CAUTION, INCLUDING REASONABLE EYE PROTECTION, SHOULD ALWAYS BE USED TO AVOID EYE CONTACT WHERE SPLASHING MAY OCCUR.

SKIN PROTECTION:

NO SPECIAL PRECAUTIONS REQUIRED; RINSE COMPLETELY FROM SKIN AFTER CONTACT.

RESPIRATORY PROTECTION:

NO SPECIAL PRECAUTIONS REQUIRED EXCEPT DURING LARGE-SCALE SPRAY APPLICATIONS WHERE SPRAY MIST LEVELS ARE HIGH.

WORK AND HYGIENIC PRACTICES:

WASH OR RINSE HANDS BEFORE TOUCHING EYES OR CONTACT LENSES. FOLLOW STANDARD HYGIENIC PRACTICES FOR HANDLING CLEANING AGENTS.

X. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/ODOR: CLEAR LIQUID

VAPOR PRESSURE:

18 MM HG @ 20 DEG. C
23.5 MM HG @ 26 DEG. C

SPECIFIC GRAVITY: 1.020

VAPOR DENSITY: 1.3 (AIR=1)

pH OF CONCENTRATE: 9.35

DENSITY: 8.5 LBS./GALLON

EVAPORATION: >1 (BUTYL ACETATE=1)

BOILING POINT: 100.6 DEG. C (212 DEG. F)

FREEZING POINT:

-16 DEG. F) IF PRODUCT FREEZES, IT WILL RECONSTITUTE WITHOUT LOSS OF ACTIVITY WHEN BROUGHT BACK TO ROOM TEMPERATURE AND AGITATED.

VOC COMPOSITE PARTIAL PRESSURE: 0 MM HG @ 20 DEG. C

VOLATILE ORGANIC COMPOUNDS (VOCs):

0 G/L PER ASTM METHOD D-2369. PER EPA METHOD 24 VOCs = 59 G/L. PRODUCT MUST BE DILUTED AT LEAST 3 PARTS OF WATER TO 1 PART CRYSTAL SIMPLE GREEN(R*) IN ORDER TO MEET SCAQMD RULE 1171 & RULE 1122 AND BAAQMD REGULATION 8-16 VOC REQUIREMENTS FOR SOLVENT CLEANING OPERATIONS.

WATER SOLUBILITY: COMPLETELY SOLUBLE IN WATER.

DETECTION:

CRYSTAL SIMPLE GREEN(R*) HAS A CHARACTERISTIC ODOR THAT IS NOT INDICATIVE OF ANY HAZARDOUS SITUATION.

XI. STABILITY AND REACTIVITY INFORMATION

NONREACTIVE. CRYSTAL SIMPLE GREEN(R*) IS STABLE, EVEN UNDER FIRE CONDITIONS, AND WILL NOT REACT WITH WATER OR OXIDIZERS. HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

XII. TOXICOLOGICAL INFORMATION

THE INFORMATION AND CONCLUSIONS CITED IN THIS SECTION ARE BASED ON DATA AND TESTING OF SIMPLE GREEN(R*) THE DATA ARE DIRECTLY APPLICABLE TO CRYSTAL SIMPLE GREEN(R*) BECAUSE, EXCEPT FOR THE FRAGRANCE AND DYES WHICH HAVE BEEN REMOVED, IT CONTAINS THE SAME INGREDIENTS AS SIMPLE GREEN(R*).

NONHUMAN TOXICITY:

ACUTE MORTALITY STUDIES:

ORAL LD50 (RAT): >5.0 G/KG BODY WEIGHT

DERMAL LD50 (RABBIT): >2.0 G/KG BODY WEIGHT

DERMAL IRRITATION:

ONLY MILD, BUT REVERSIBLE, IRRITATION WAS FOUND IN A STANDARD 72-HR TEST ON RABBITS. A VALUE OF 0.2 (NON-IRRITATING) WAS FOUND ON A SCALE OF 8.

EYE IRRITATION:

WITH OR WITHOUT RINSING WITH WATER, THE IRRITATION SCORES IN RABBITS AT 24 HOURS DID NOT EXCEED 15 (MILD IRRITANT) ON A SCALE OF 110.

SUBCHRONIC DERMAL EFFECTS:

NO ADVERSE EFFECTS, EXCEPT REVERSIBLE DERMAL IRRITATION, WERE FOUND IN RABBITS EXPOSED TO SIMPLE GREEN(R*) (UP TO 2.0 G/KG/DAY FOR 13 WEEKS) APPLIED TO THE SKIN OF 25 MALES AND 25 FEMALES. ONLY FEMALE BODY WEIGHT GAIN WAS AFFECTED. DETAILED MICROSCOPIC EXAMINATION OF ALL MAJOR TISSUES SHOWED NO CHANGES.

FERTILITY ASSESSMENT BY CONTINUOUS BREEDING:

THE SIMPLE GREEN(R*) FORMULATION HAD NO ADVERSE EFFECT ON FERTILITY AND REPRODUCTION IN CD-1 MICE WITH CONTINUOUS ADMINISTRATION FOR 18 WEEKS, AND HAD NO ADVERSE EFFECT ON THE REPRODUCTIVE PERFORMANCE OF THEIR OFFSPRING.

XIII. BIODEGRADABILITY AND ENVIRONMENTAL TOXICITY INFORMATION

BIODEGRADABILITY:

LIKE SIMPLE GREEN(R*) CRYSTAL SIMPLE GREEN(R*) IS READILY DECOMPOSED BY NATURALLY OCCURRING MICROORGANISMS. THE BIOLOGICAL OXYGEN DEMAND (BOD), AS A PERCENTAGE OF THE CHEMICAL OXYGEN DEMAND (COD), AFTER 4, 7, AND 11 DAYS WAS 56%, 60%, AND 70%, RESPECTIVELY. PER OECD CLOSED BOTTLE TEST, CRYSTAL SIMPLE GREEN(R*) MEETS OECD AND EPA RECOMMENDATIONS FOR READY BIODEGRADABILITY.

IN A STANDARD BIODEGRADATION TEST WITH SOILS FROM THREE DIFFERENT COUNTRIES, BUTYL CELLOSOLVE REACHED 50% DEGRADATION IN 6 TO 23 DAYS, DEPENDING UPON SOIL TYPE, AND EXCEEDED THE RATE OF DEGRADATION FOR GLUCOSE, WHICH WAS USED AS A CONTROL FOR COMPARISON.

ENVIRONMENTAL TOXICITY INFORMATION:

CRYSTAL SIMPLE GREEN(R*) IS CONSIDERED PRACTICALLY NON-TOXIC PER EPA'S AQUATIC TOXICITY SCALE.

XIV. DISPOSAL CONSIDERATIONS

CRYSTAL SIMPLE GREEN(R*) IS FULLY WATER SOLUBLE AND BIODEGRADABLE AND WILL NOT HARM SEWAGE-TREATMENT MICROORGANISMS IF DISPOSAL BY SEWER OR DRAIN IS NECESSARY. DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS.

XV. OTHER INFORMATION

CONTAINERS:

CRYSTAL SIMPLE GREEN(R*) RESIDUES CAN BE COMPLETELY REMOVED BY RINSING WITH WATER; THE CONTAINER MAY BE RECYCLED OR APPLIED TO OTHER USES.

CONTACT POINT:

SUNSHINE MAKERS, INC., RESEARCH AND DEVELOPMENT DIVISION: 562-795-6000.

NOTICE:

ALL INFORMATION APPEARING HEREIN IS BASED UPON DATA OBTAINED BY THE MANUFACTURER AND RECOGNIZED TECHNICAL SOURCES. JUDGMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR PURCHASER'S PURPOSES ARE NECESSARILY PURCHASER'S RESPONSIBILITY. THEREFORE, ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF THIS INFORMATION, SUNSHINE MAKERS, INC. OR ITS EMPLOYEES EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS AND ASSUMES NO LIABILITY AS TO THE SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO PURCHASER'S INTENDED PURPOSES OR FOR CONSEQUENCES OF ITS USE.

ITEM: 3U521 - Soap Hand 1 Gal

PICK REQ: 1026397306

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A7483

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A7483

Jed Grainger Item: 3U521 - Soap Hand 1 Gal

GOJO(R*)

DATE: 15 NOVEMBER 2004

SUPERCEDES: 1 SEPTEMBER 2004

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT: 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION

PRODUCT NAME: GOJO(R*) NATURAL* ORANGE(TM) PUMICE HAND CLEANER

COMPANY NAME & ADDRESS:

GOJO INDUSTRIES, INC.
ONE GOJO PLAZA, SUITE 500
AKRON, OH 44311

EMERGENCY PHONE: 1-800-424-9300 CHEMTREC

NON-EMERGENCY PHONE: (330) 255-6000

MSDS REQUEST PHONE: (330) 255-6000 X 8804

2. INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS CAS NUMBER OSHA PEL ACGIH TLV % RANGE
NONEOTHER INGREDIENT(S) WITH NOTIFICATION REQUIREMENTS CAS NUMBER LIST
D-LIMONENE 5989-27-5 CN 1

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

WHEN USED ACCORDING TO INSTRUCTIONS, THE PRODUCT APPLICABLE TO THIS MSDS IS SAFE AND PRESENTS NO IMMEDIATE OR LONG-TERM HEALTH HAZARD. HOWEVER, ABNORMAL ENTRY ROUTES, SUCH AS GROSS INGESTION, MAY REQUIRE IMMEDIATE MEDICAL ATTENTION.

HEALTH EFFECTS:

HEALTH 0
FLAMMABILITY 1
REACTIVITY 0
PERSONAL PROTECTION NONE

EYE CONTACT: MAY CAUSE EYE IRRITATION.

SKIN CONTACT: NO IRRITATION OR REACTION EXPECTED.

INHALATION: NOT APPLICABLE.

INGESTION: MAY CAUSE UPSET STOMACH, NAUSEA (ABNORMAL ENTRY ROUTE).

CARCINOGENICITY: NOT LISTED AS A CARCINOGEN BY NTP, IARC, OSHA OR ACGIH.

4. FIRST AID MEASURES

EYE CONTACT:

DO NOT RUB EYES. FLUSH EYES THOROUGHLY WITH WATER FOR 15 MINUTES. IF CONDITION WORSENS OR IRRITATION PERSISTS, CONTACT PHYSICIAN.

SKIN CONTACT: NOT APPLICABLE.

INHALATION: NOT APPLICABLE.

INGESTION:

DO NOT INDUCE VOMITING. CONTACT A PHYSICIAN OR POISON CONTROL CENTER.

5. FIRE FIGHTING MEASURES

NFPA:

HEALTH 0
FIRE 1
REACTIVITY 0

FLASHPOINT DEG. F/DEG. C (PMCC METHOD): NOT DETERMINED.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN.

SPECIAL FIRE FIGHTING PROCEDURES: NONE KNOWN.

EXTINGUISHING MEDIA:

(X) WATER FOG
(X) ALCOHOL FOAM
(X) CO2
(X) DRY CHEMICAL

6. ACCIDENTAL RELEASE MEASURES

NO SPECIAL REQUIREMENTS. WATER CLEAN UP AND RINSE. CAUTION - WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE

STORE AT NORMAL ROOM TEMPERATURE AWAY FROM REACH OF SMALL CHILDREN. KEEP CONTAINERS SEALED, USE OLDER CONTAINERS FIRST. AVOID FREEZING CONDITIONS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: NONE REQUIRED UNDER NORMAL CONDITIONS.

SKIN PROTECTION: NONE REQUIRED UNDER NORMAL CONDITIONS.

RESPIRATORY PROTECTION: NONE REQUIRED UNDER NORMAL CONDITIONS.

VENTILATION: NONE REQUIRED UNDER NORMAL CONDITIONS.

PROTECTIVE EQUIPMENT OR CLOTHING: NONE REQUIRED UNDER NORMAL CONDITIONS.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: CREAMY OPAQUE VISCOUS GEL, ORANGE FRAGRANCE.

pH (UNDILUTED): 5.0-8.0

VOC, %: 7%

10. STABILITY AND REACTIVITY

STABLE/NON REACTIVE PRODUCT.

11. TOXICOLOGICAL INFORMATION

NO ACUTE OR CHRONIC TOXIC EFFECTS EXPECTED WHEN USED ACCORDING TO DIRECTIONS.

12. ECOLOGICAL CONSIDERATIONS

NO ECOLOGICAL OR SPECIAL CONSIDERATIONS WHEN USED ACCORDING TO DIRECTIONS. NOT CONSIDERED ENVIRONMENTALLY HARMFUL FROM NORMAL DILUTION, EXPECTED USAGE AND TYPICAL DRAINAGE TO SEWERS, SEPTIC SYSTEMS AND TREATMENT PLANTS.

13. DISPOSAL CONSIDERATIONS

NO SPECIAL CONSIDERATIONS WHEN DISPOSED ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A HAZARDOUS MATERIAL.

15. REGULATORY AND OTHER INFORMATION

TSCA:

ALL INGREDIENTS ARE LISTED OR EXEMPT PER REFERENCE 15 USC 2602 (2) (B) (IV).

COMPLIES WITH CURRENT FDA REGULATIONS FOR COSMETIC AND/OR OVER-THE-COUNTER DRUG PRODUCTS.

NOTICE:

THE INFORMATION HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE AS OF THE DATE OF PREPARATION OF THIS MATERIAL SAFETY DATA SHEET. HOWEVER, NO WARRANTY REPRESENTATION, EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE FOREGOING DATA AND SAFETY INFORMATION. THE USER ASSUMES ALL LIABILITY FOR ANY DAMAGE OR INJURY RESULTING FROM ABNORMAL USE, FROM ANY FAILURE TO ADHERE TO RECOMMENDED PRACTICES OR FROM ANY HAZARDS INHERENT IN THE NATURE OF THE PRODUCT.

DOCUMENT#: 7255-502

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A6348

A. ed Grainger Item: 3CA44 - BLEACH ULTRA PK6 960Z

MATERIAL SAFETY DATA SHEET

HARDBALL BLEACH 6.0% WT

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: HARDBALL BLEACH

MANUFACTURER:
CHAMPION PACKAGING
1840 INTERNATIONALE PARKWAY
WOODRIDGE, IL 60517
(630) 972-0100

DATE LAST REVISED: JANUARY 1, 2004

CAS NUMBER: 7681-52-9

CHEMICAL FORMULA: NaOCl (SOLUTION)

HAZARDOUS INGREDIENTS: SODIUM HYPOCHLORITE 6.0% WT

EMERGENCY TELEPHONE NO.:
INFOTRAC: 1-800-535-5053

SECTION II - PHYSICAL DATA

APPEARANCE: CLEAR TO YELLOW LIQUID

ODOR: PUNGENT, IRRITATING, THAT OF HOUSEHOLD BLEACH.

SOLUBILITY: COMPLETE

BOILING POINT: DECOMPOSES PRIOR TO BOILING

SPECIFIC GRAVITY: 1.096 @ 60 DEG. F

pH: 12.75

VAPOR PRESSURE: APPROXIMATELY THAT OF AIR

EVAPORATION RATE: NOT APPLICABLE

SECTION III - FIRE AND EXPLOSION INFORMATION

IT IS CONSIDERED TO BE A FIRE HAZARD.

EXPLOSION: NOT CONSIDERED AN EXPLOSION HAZARD.

FIRE EXTINGUISHING MEDIA:
USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE.

SPECIAL INFORMATION:
WEAR FULLY ENCAPSULATED SUITS WITH SELF-CONTAINED BREATHING APPARATUS
(POSITIVE PRESSURE).

SECTION IV - REACTIVITY DATA

STABILITY:
STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE. UNSTABLE AT ELEVATED TEMPERATURES.

HAZARDOUS DECOMPOSITION PRODUCTS:
DECOMPOSES UNDER VARIOUS MECHANISMS. MAY GENERATE CHLORINE OR OXYGEN, WHICH CAN BE TOXIC AND EXPLOSIVE, RESPECTIVELY.

HAZARDOUS POLYMERIZATION: THIS SUBSTANCE DOES NOT POLYMERIZE.

INCOMPATIBILITIES (MATERIAL TO AVOID):
REACTS VIGOROUSLY WITH AMINE, AMMONIUM ACETATE, AMMONIUM OXALATE, ACIDS AND MOST ORGANICS.

SECTION V - LEAK/SPILL DISPOSAL INFORMATION

RELEASES/SPILLS: MOVE UNPROTECTED PERSONNEL UPWIND OUT OF DANGER.

REPORTABLE QUANTITY (RQ) (CWA/CERCLA): 100 LBS., 454 KG

DISPOSAL:
DILUTE WITH WATER AND FLUSH TO LOCAL SEWER SYSTEM, IF PERMITTED. SOLID WASTE MUST BE DISPOSED OF IN A PERMITTED WASTE MANAGEMENT FACILITY. ENSURE COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

SECTION VI - HEALTH HAZARD INFORMATION

EXPOSURE/HEALTH EFFECTS:

INHALATION: RESPIRATORY TRACT IRRITANT.

INGESTION: CAN CAUSE CORROSION OF THE MUCCOUS MEMBRANES.

ADDITIONAL INFORMATION:
POISON CONTROL CENTER OR DOCTOR IMMEDIATELY FOR TREATMENT ADVICE.
DO NOT INDUCE VOMITING.
IF SWALLOWED, DRINK A GLASS OF WATER IF ABLE TO SWALLOW. DO NOT INDUCE VOMITING.
TOLD TO DO SO BY THE POISON CONTROL CENTER OR DOCTOR. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

SKIN CONTACT:
CONTACT WITH LIQUID CAN CAUSE CHEMICAL BURNS. IMMEDIATELY FLUSH WITH SOAP AND WATER.

EYE CONTACT:

HOLD EYE OPEN AND RINSE SLOWLY AND GENTLY WITH WATER FOR 15-20 MINUTES. REMOVE CONTACT LENSES, IF PRESENT, AFTER THE FIRST 5 MINUTES, THEN CONTINUE RINSING EYE. CALL A POISON CONTROL CENTER OR DOCTOR FOR TREATMENT ADVICE.

CHRONIC EXPOSURE: NO DATA FOUND.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

NTP: NO
IARC: NO
OSHA: NO
ACGIH: NO.

SECTION VII - OCCUPATIONAL CONTROL MEASURES

OSHA PERMISSIBLE EXPOSURE LIMITS: NOT ESTABLISHED.

VENTILATION SYSTEM: LOCAL EXHAUST.

PERSONAL RESPIRATORS:
(NIOSH APPROVED) RECOMMENDED FOR ALL PERSONNEL WORKING IN OR ABOUT AN AREA OF POTENTIAL EXPOSURE.

SKIN PROTECTION:
WEAR IMPERVIOUS PROTECTIVE CLOTHING INCLUDING BOOTS, GLOVES, LAB COAT, APRON, OR COVERALLS TO PREVENT SKIN CONTACT.

EYE PROTECTION:
USE CHEMICAL SAFETY GOGGLES THAT ARE IMPERVIOUS TO PRODUCT. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS MATERIAL. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

SECTION VIII - STORAGE AND SPECIAL INFORMATION

STORE IN COOL, DRY, VENTILATED AREA. PROTECT AGAINST PHYSICAL DAMAGE. KEEP SEPARATE FROM INCOMPATIBLES.

SECTION IX - REGULATORY INFORMATION

REGULATED UNDER THE FEDERAL INSECTICIDE FUNGICIDE AND ROTENTICIDE ACT (FIFRA) IF ANY SANITATION OR DISINFECTION CLAIMS ARE MADE ON LABEL.

NEPA/HMIS RATINGS:

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
HIGHER ALKALINITY	R - 1.

SARA TITLE III - SEC. 302, 304, 311, 312.

REPORTABLE QUANTITY (RQ) (CWA/CERCLA): 100 LBS.

THE INFORMATION CONTAINED HEREIN IS PROVIDED IN GOOD FAITH AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF; HOWEVER, CHAMPION PACKAGING, INC. MAKES NO REPRESENTATION AS TO THE COMPREHENSIVENESS OR ACCURACY OF THE INFORMATION. IT IS EXPECTED THAT INDIVIDUALS RECEIVING THE INFORMATION WILL EXERCISE THEIR INDEPENDENT JUDGMENT IN DETERMINING ITS APPROPRIATENESS FOR A PARTICULAR PURPOSE. ACCORDINGLY, CHAMPION PACKAGING, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES OF ANY KIND RESULTING FROM THE USE OF OR RELIANCE UPON SUCH INFORMATION. NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION REFERS.

4. Lubricants

MATERIAL SAFETY DATA SHEET



Date-Issued: 12/05/2002
MSDS Ref. No: 171
Date-Revised: 01/29/2003
Revision No: 2

Diversitech - 18000, 18001, 18002, 18003, 18004, 18005**1. PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: 2000

Manufactured for DIVERSITECH CORPORATION

Geocel Corporation
P.O. Box 398
Elkhart, IN 46514
Product Stewardship: (574)264-0645

Emergency Phone: (800)255-3924

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt. %</u>	<u>CAS#</u>	<u>EINECS#</u>
Aromatic Hydrocarbon	64742-95-6	265-199-0	
2-methoxy-1-methyl ethyl acetate	108-65-6	203-603-9	
Tetrachloroethylene	127-18-4	204-825-9	

3. HAZARDS IDENTIFICATION**POTENTIAL HEALTH EFFECTS**

EYES: May cause significant irritation to the eyes.

SKIN: May cause significant irritation to the skin.

INHALATION: May cause significant pulmonary irritation.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Irritation of the eye.

SKIN: Irritation of the skin.

INGESTION: Possible nausea and/or vomiting.

INHALATION: Headache and dizziness.

CHRONIC: Frequent or prolonged overexposure may irritate or cause dermatitis.

CARCINOGENICITY: This product contains chemicals suspected of being carcinogens by the NTP and OSHA.

MEDICAL CONDITIONS AGGRAVATED: Pre-existing eye, skin and respiratory disorders.

ROUTES OF ENTRY: Inhalation, ingestion, absorption through the eyes and skin.

4. FIRST AID MEASURES

EYES: Flush with large amounts of water, lifting upper and lower lids occasionally. Seek medical attention.

SKIN: Remove contaminated clothing including shoes and immediately wash affected area with plenty of soap and water. Wash contaminated clothing and shoes before reuse.

INGESTION: Give large amounts of water. Do not induce vomiting. Seek medical attention.

INHALATION: Move individual to fresh air.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: (114°F)TAG CC

FLAMMABLE LIMITS: 1 to 7

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical or fog.

EXPLOSION HAZARDS: Solvent vapors are heavier than air and may travel along the ground or be moved by ventilation and be ignited by sources distant from handling points.

FIRE FIGHTING EQUIPMENT: Standard protective fire fighting clothing and breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Wearing the personal protective equipment designated in Section 8, carefully contain the spill and transfer it to the appropriate receptacle. Ventilate well.

LARGE SPILL: Wearing the personal protective equipment designated in Section 8, carefully contain the spill and transfer it to the appropriate receptacle. Ventilate well.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Avoid storage at extremes of temperature.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**PERSONAL PROTECTIVE EQUIPMENT**

EYES AND FACE: Wear safety glasses with side shields or goggles when handling this material.

SKIN: Chemical resistant protective gloves are recommended.

RESPIRATORY: Not required with adequate ventilation.

WORK HYGIENIC PRACTICES: Wash hands thoroughly after each use, especially before eating or smoking. Good personal hygiene practices should always be followed.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Hydrocarbon odor.

APPEARANCE: Viscous liquid.

VAPOR PRESSURE: 3 mmHg at 20°C

VAPOR DENSITY: 4 (Air=1)

BOILING POINT: Not Applicable

MELTING POINT: Not Applicable

SOLUBILITY IN WATER: Insoluble

EVAPORATION RATE: 0.3 (n-Butyl Acetate=1)

DENSITY: 10.25

SPECIFIC GRAVITY: 1.23

(VOC): 571 g/l

(VOC) NOTES: VOC content is less than 4% by weight.

10. STABILITY AND REACTIVITY

STABLE: YES

HAZARDOUS POLYMERIZATION: NO

INCOMPATIBLE MATERIALS: Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: This material may cause significant irritation to the eyes.

SKIN EFFECTS: This material may cause significant irritation to the skin.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No ecological studies have been carried out on this product.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

OTHER SHIPPING INFORMATION: Generators must consult DOT laws and regulations to ensure the product is being transported appropriately.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: This product poses the following physical and health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986:

FIRE: YES PRESSURE GENERATING: NO REACTIVITY: NO ACUTE: YES CHRONIC: YES

313 REPORTABLE INGREDIENTS: This product contains the following chemical(s) subject to reporting under SARA Title III Section 313:

Tetrachloroethylene

CALIFORNIA PROPOSITION 65: This product contains the following products on California's Proposition 65 List:
Tetrachloroethylene

16. OTHER INFORMATION

PREPARED BY: Wendy M. Smith, Environmental Specialist

REVISION SUMMARY Revision #: 2

This MSDS replaces the January 16, 2003 MSDS. Any changes in information are as follows:

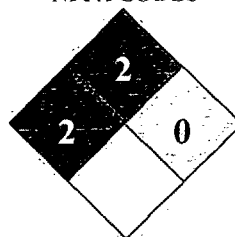
In Section 9

Density (lbs) Specific Gravity (From) Volatile Org Comp (VOC) VOC (From)

HMIS RATING

HEALTH:		2
FLAMMABILITY:		2
PHYSICAL HAZARD:		0
PERSONAL PROTECTION:	B	

NFPA CODES





XIAMETER(R) Material Safety Data Sheet

Page: 1 of 7

Version: 1.1

Revision Date: 2004/03/25

DAP(R) 100% SILICONE RUBBER SEALANT WHITE, 683

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

24 Hour Emergency Telephone: (989) 496-5900

Customer Service: (989) 496-6000

Product Disposal Information: (989) 496-6315

CHEMTREC: (800) 424-9300

MSDS No.: 03301044

Revision Date: 2004/03/25

Generic Description: Silicone elastomer

Physical Form: Paste

Color: White

Odor: Acetic acid odor

NFPA Profile: Health 2 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

2. OSHA HAZARDOUS COMPONENTS

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
17689-77-9	1.0 - 5.0	Ethyltriacetoxysilane
4253-34-3	1.0 - 5.0	Methyltriacetoxysilane

The above components are hazardous as defined in 29 CFR 1910.1200.

3. EFFECTS OF OVEREXPOSURE

Acute Effects

Eye: Direct contact may cause moderate irritation.

Skin: May cause moderate irritation.

Inhalation: Irritates respiratory passages very slightly.

Oral: No significant effects expected from a single short-term exposure.

Prolonged/Repeated Exposure Effects

Skin: No known applicable information.

Inhalation: No known applicable information.

Oral: No known applicable information.

Signs and Symptoms of Overexposure



XIAMETER(R) Material Safety Data Sheet

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DAP(R) 100% SILICONE RUBBER SEALANT WHITE, 683

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

4. FIRST AID MEASURES

Eye:	Immediately flush with water for 15 minutes. Get medical attention.
Skin:	Remove from skin and wash thoroughly with soap and water or waterless cleanser. Get medical attention if irritation or other ill effects develop or persist.
Inhalation:	No first aid should be needed.
Oral:	No first aid should be needed.
Comments:	Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point:	Not applicable.
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.
Extinguishing Media:	Carbon dioxide (CO ₂). Water spray. Dry chemical. Foam. Water can be used to cool fire exposed containers.
Fire Fighting Measures:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan.
Unusual Fire Hazards:	None.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Silicon dioxide. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde.

6. ACCIDENTAL RELEASE MEASURES



XIAMETER(R) Material Safety Data Sheet

Page: 3 of 7

Version: 1.1

Revision Date: 2004/03/25

DAP(R) 100% SILICONE RUBBER SEALANT WHITE, 683

Containment/Clean up: Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements. Wipe up or scrape up and contain for salvage or disposal. Observe all personal protection equipment recommendations described in Sections 5 and 8. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable.

Note: See section 8 for Personal Protective Equipment for Spills. Call (989) 496-5900, if additional information is required.

7. HANDLING AND STORAGE

Use with adequate ventilation. Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid skin contact.

Keep container closed and store away from water or moisture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

<u>CAS Number</u>	<u>Component Name</u>	<u>Exposure Limits</u>
17689-77-9	Ethyltriacetoxysilane	See acetic acid comments.
4253-34-3	Methyltriacetoxysilane	See acetic acid comments.

Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 ppm.

Engineering Controls

Local Ventilation: Recommended.
General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Suitable Gloves: Silver Shield(R). 4H(R).

Inhalation: No respiratory protection should be needed.



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DAP(R) 100% SILICONE RUBBER SEALANT WHITE, 683

Suitable Respirator: None should be needed.

Personal Protective Equipment for Spills

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Inhalation/Suitable Respirator: No respiratory protection should be needed.

Precautionary Measures: Avoid eye contact. Avoid skin contact. Use reasonable care.

Comments: Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Paste

Color: White

Odor: Acetic acid odor

Specific Gravity @ 25°C: 1.04

Viscosity: Not determined.

Freezing/Melting Point: Not determined.

Boiling Point: Not determined.

Vapor Pressure @ 25°C: Not determined.

Vapor Density: Not determined.

Solubility in Water: Not determined.

pH: Not determined.

Volatile Content: Not determined.

Note: The above information is not intended for use in preparing product specifications.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Hazardous polymerization will not occur.

Conditions to Avoid: None.

Materials to Avoid: Water, moisture, or humid air can cause hazardous vapours to form as described in Section 8. Oxidizing material can cause a reaction.



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11. TOXICOLOGICAL INFORMATION

Component Toxicology Information

No known applicable information.

Special Hazard Information on Components

No known applicable information.

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	≤ 1	>1 and ≤ 100	>100
Acute Terrestrial Toxicity	≤ 100	>100 and ≤ 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

13. DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No

State or local laws may impose additional regulatory requirements regarding disposal.

Call (989) 496-6315, if additional information is required.

14. TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)

Not subject to DOT.



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Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (IATA)

Not subject to IATA regulations.

15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances:

None.

Section 304 CERCLA Hazardous Substances:

None.

Section 312 Hazard Class:

Acute: Yes
Chronic: No
Fire: No
Pressure: No
Reactive: No

Section 313 Toxic Chemicals:

None present or none present in regulated quantities.

Supplemental State Compliance Information

California

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

Massachusetts

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
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DAP(R) 100% SILICONE RUBBER SEALANT WHITE, 683

7631-86-9 10.0 - 30.0 Silica, amorphous

New Jersey

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
70131-67-8	> 60.0	Dimethyl siloxane, hydroxy-terminated
7631-86-9	10.0 - 30.0	Silica, amorphous
4253-34-3	1.0 - 5.0	Methyltriacetoxysilane
17689-77-9	1.0 - 5.0	Ethyltriacetoxysilane
63148-62-9	1.0 - 5.0	Polydimethylsiloxane

Pennsylvania

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
70131-67-8	> 60.0	Dimethyl siloxane, hydroxy-terminated
7631-86-9	10.0 - 30.0	Silica, amorphous

16. OTHER INFORMATION

Prepared by: Dow Corning Corporation

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

XIAMETER(R) is a trademark of Dow Corning Corporation

<http://www.xiameter.com>

MARINE TEX CATALYST JELLY

This product appears in the following stock number(s):

3001C 3001U 3003C 3003U 3005C 3005U 3007C 3007U
3011C 3011U 3013C 3013U 3015C 3015U 3017C 3017U

Last revised: 07/24/03

Printed: 9/30/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tradename: MARINE TEX CATALYST JELLY

General use: The following data pertain to the hardener only; properly mixed and cured epoxies are not hazardous.

Chemical family: Modified aliphatic polyamine

MANUFACTURERITW Philadelphia Resins
130 Commerce Dr.
Montgomeryville, PA 18936**EMERGENCY INFORMATION**

Emergency telephone number

(CHEMTREC): (800) 424-9300

Other Calls: (215) 855-8450

2. COMPOSITION/INFORMATION ON INGREDIENTS**HAZARDOUS CONSTITUENTS****Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Diethylenetriamine	DETA	111400	30-40	1 ppm	1 ppm	1ppm (Canada)
Polyamide of C18 fatty acid dimers and TETA		68410231	60-70	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance, form, odor: Amber gel with mild ammonia-like odor.

DANGER! Corrosive. Causes eye and skin burns. Eye, skin and respiratory irritant. Toxic by skin absorption. May cause skin sensitization.**Potential health effects**Primary routes of exposure: ☒ Skin contact ☒ Skin absorption ☒ Eye contact ☒ Inhalation ☐ Ingestion**Symptoms of acute overexposure:****Skin:** Corrosive. Severe irritation (defatting, itching, redness, blistering), pain, burns and permanent damage. Product is absorbed through the skin and may cause nausea, general discomfort, injury and death unless treated promptly. Potential sensitizer.**Eyes:** Corrosive. Severe irritation (redness, swelling), pain or burns; may cause permanent eye injury (including

blindness). Vapors can cause lacrimation, conjunctivitis, and corneal edema.

Inhalation:

Corrosive. Can cause irritation of respiratory tract and mucous membranes (nasal discharge, coughing, discomfort). Over exposure to fumes or vapors may cause lung injury. May cause nausea and vomiting. Inhalation of aerosols and mists may severely damage contacted tissue and produce scarring.

Ingestion:

May cause burns of mouth, throat and stomach with abdominal and chest pain, nausea, vomiting, diarrhea, thirst, weakness and collapse.

Effects of chronic overexposure:

Repeated skin contact or inhalation may cause sensitization / dermatitis, with allergic symptoms on subsequent exposure (rash, defatting, nausea, headaches). Repeated or prolonged exposure may cause adverse respiratory effects (cough, tightness of chest, shortness of breath, dryness of nasal passages), eye effects (conjunctivitis, corneal damage), or skin effects (rash, irritation, corrosion). Repeated inhalation may cause lung damage. Repeated oral exposures may cause kidney and liver changes.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

international Agency for Research on Cancer:No

Cancer-suspect constituent(s) : None

Medical conditions which may be aggravated by exposure:

May aggravate existing skin disorders and allergies, eye disease, and respiratory conditions (i.e. bronchitis, emphysema).

Other effects:

Inhalation of ethyleneamines may cause sensitization of the respiratory tract and the development of an asthmatic reaction on further exposure. There may be susceptible individuals who develop long-term hyperreactive airways, asthma, and other respiratory injury following exposure to extremely low concentrations of ethyleneamines, even below the irritation threshold. Skin contact may cause sensitization and an allergic skin reaction. Cross-sensitization may occur by skin contact with this material and other amines. Exposure to vapor may also cause minor transient edema of the corneal epithelium (blue-haze). This effect produces a blurring of vision against a general bluish haze and the appearance of halos around bright objects. The effect disappears spontaneously within a few hours of the end of exposure and leaves no sequelae.

4. FIRST AID MEASURES**First aid for eyes:**

Immediately flush with clean water for at least 15 minutes holding eyelids open. Get medical help immediately.

First aid for skin:

Remove contaminated clothing, wipe off affected area. Flush with water for 15 minutes. Wash with soap & warm water. See doctor if irritation develops.

First aid for inhalation:

Remove patient to fresh air. Give oxygen or artificial respiration if needed. See a doctor if symptoms persist. Prevent aspiration of vomit. Turn victims head to side.

First aid for ingestion:

Corrosive--do not induce vomiting. If patient is conscious, dilute with milk or water. Get immediate medical help. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES**Extinguishing media:**

☒ Water

☒ Carbon dioxide

☒ Dry chemical

☒ Foam

☐ Alcohol foam

Flash Point (°F): >200**Method:** estimate**Explosive limits in air (percent) -- Lower:** n/d **Upper:** n/d**Special firefighting procedures:**

Firefighters should wear self-contained breathing apparatus and full protective gear. Keep containers cool with water spray.

Unusual fire and explosion hazards:

Personnel in vicinity and downwind should be evacuated. Sudden reaction and fire may result if mixed with oxidizing agent.

Hazardous products of combustion:

Oxides of carbon, oxides of nitrogen, ammonia. Toxic smoke and vapors may form during combustion.

6. ACCIDENTAL RELEASE MEASURES**Spill control:**

Avoid personal contact. Eliminate ignition sources. Ventilate area.

Containment:

Dike, contain and absorb with clay, sand or other suitable material.

Cleanup:

For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly. Flush area with water to remove trace residue. Clean-up personnel must be equipped with self contained breathing apparatus and butyl rubber protective clothing.

Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters.

7. HANDLING AND STORAGE**Handling precautions:**

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Avoid breathing vapors. Handle in well ventilated work area.

Launder contaminated clothing and protective gear before reuse. Discard contaminated leather articles.

Handle mixed resin and hardener in accordance with the potential hazard of the curing agent used. Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against nuisance dust during sanding/grinding of cured product. Do not use sodium nitrite or other nitrosating agents in formulations containing this product, cancer-causing nitrosamines could be formed.

Storage:

Keep away from acids and oxidizers. Store in a cool, dry, ventilated area in closed containers. Keep away from high temperatures (<100 F) and flames. Do not store in reactive metal containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Engineering controls****Ventilation :**

General mechanical ventilation is adequate for occasional use. For prolonged or repeated use or in confined areas, local exhaust is recommended.

Other engineering controls :

Have emergency shower and eye wash stations available..

Personal protective equipment**Eye and face protection:**

Splashproof chemical goggles

Skin protection:

Chemical-resistant rubber (i.e. butyl rubber, neoprene) gloves and other protective gear as needed to prevent skin contact

Respiratory protection:

None needed in normal use with proper ventilation. In poorly ventilated areas, use NIOSH approved organic vapor masks.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	0.99	Boiling point (°F):	>400
Melting point (°F):	n/d	Vapor density (air = 1):	>1
Vapor pressure (mmHg):	<1 at 68 °F	Evaporation rate (butyl acetate = 1):	<<1
VOC (grams/liter):	0	Solubility in water:	Miscible
Percent volatile by volume:	0	pH (5% solution or slurry in water):	10.5-11.5
Percent solids by weight:	100		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid :

Extreme heat or open flame. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

Incompatible materials:

Oxidizers, acids, reactive metals. Sodium or calcium hypochlorite. Nitrous acid, nitrites, nitrous oxide atm. Peroxides.

Hazardous products of decomposition:

Acrid and toxic fumes including organic amines, ammonia, oxides of nitrogen (highly toxic) and carbon, nitric acid, nitrosamines.

Conditions under which hazardous polymerization may occur:

Heat is generated when this hardener reacts with acids and epoxy resins. Mix only as instructed.

11. TOXICOLOGICAL INFORMATION**Acute oral effects:** LD50 (rat): > 1000 mg/kg (estimate)**Acute dermal effects:** LD50 (rabbit): Not available.

DETA: Corrosive, sensitizer.

Acute inhalation effects: LC50 (rat): Not available.

Exposure: hours.

Eye irritation:

DETA: Corrosive

Subchronic effects:

DETA may cause respiratory sensitization in susceptible individuals.

Carcinogenicity, teratogenicity, and mutagenicity:

DETA: Did not cause cancer in long-term animal studies. Teratology: No relevant information found. Reproductive effects: In an oral gavage screening study, DETA has been toxic to the fetus in laboratory animal tests.

Other chronic effects:

DETA has caused liver and kidney damage in laboratory animals.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Diethylenetriamine	1080 mg/kg	1090 mg/kg	n/d
Polyamide of C18 fatty acid dimers and TETA	>8000 mg/kg	>8000 mg/kg	n/d

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

DETA: Acute LC50 for water flea (*Daphnia magna*) is 17 mg/l; DETA: Acute LC50 for fathead minnow (*Pimephales promelas*) is 332 mg/L. DETA: Acute LC50 for brine shrimp (*Artemia salina*) is 710 mg/L.

Mobility and persistence:

Not available.

Environmental fate:

Not available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

If this material becomes a waste, it would not be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

Proper shipping name: Corrosive liquid, basic, organic, n.o.s.
Technical name : Diethylenetriamine
Hazard class : 8
UN number: 3267
Packing group: III
Emergency Response Guide no.: 153
IMDG page number: N/A
Other:

15. REGULATORY INFORMATION**U.S. Federal Regulations****TSCA**

All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:

None

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Diethylenetriamine	No	No	0.0	Required
Polyamide of C18 fatty acid dimers and TETA	No	No	0.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -

Canadian regulations

WHMIS hazard class(es) : D2B; E

All components of this product are on the Domestic Substances List.

16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) ratings:	Health 3*	Flammability 1	Reactivity 0
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The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.

MARINE TEX WHITE RESIN

This product appears in the following stock number(s):

3011C 3011U 3013C 3013U 3015C 3015U 3017C 3017U

Last revised: 09/29/05

Printed: 9/30/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** MARINE TEX WHITE RESIN**General use:** This information applies to the resin component of the two-part kit; handle freshly-mixed resin and hardener as recommended for the hardener. After curing, the product is not hazardous.**Chemical family:** Epoxy resin**MANUFACTURER**ITW Philadelphia Resins
130 Commerce Dr.
Montgomeryville, PA 18936**EMERGENCY INFORMATION****Emergency telephone number**
(CHEMTREC): (800) 424-9300
Other Calls: (215) 855-8450**2. COMPOSITION/INFORMATION ON INGREDIENTS****HAZARDOUS CONSTITUENTS****Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Crystalline silica		14808607	< 1	0.05 mg/m ³	4/(%Q+2)ppm	0.10 mg/m ³ (Canada)
Cresyl glycidyl ether		2210799	< 5	n/e	n/e	n/e
Bisphenol A diglycidyl ether resin	DGEBPA	25068386	30-60	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance, form, odor: Grey viscous liquid with little odor.

WARNING! Eye and skin irritant. Potential skin sensitizer.**Potential health effects****Primary routes of exposure:** ☒ Skin contact ☐ Skin absorption ☒ Eye contact ☐ Inhalation ☐ Ingestion**Symptoms of acute overexposure:****Skin:** Moderate irritant. Contact at elevated temperatures can cause thermal burns. May cause skin sensitization (rashes, hives).**Eyes:** Moderate to severe irritant. May cause corneal damage. Contact at elevated temperatures can cause thermal burns.

Inhalation:

The low vapor pressure of the resin makes inhalation unlikely in normal use.

Ingestion:

Acute oral toxicity is low. May cause gastric distress. May cause depression and slight difficulty breathing.

Effects of chronic overexposure:

Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure.

Studies have shown bisphenol A diglycidyl ether resin to be a sensitizing agent causing allergic contact dermatitis.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: Yes

International Agency for Research on Cancer: Yes

Cancer-suspect constituent(s): Respirable crystalline silica

Medical conditions which may be aggravated by exposure:

Preexisting eye and skin disorders. Development of preexisting skin or lung allergy symptoms may increase.

Other effects:

See section 11.

4. FIRST AID MEASURES**First aid for eyes:**

Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.

First aid for skin:

Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with soap and warm water. Consult a physician if irritation develops.

First aid for inhalation:

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention.

First aid for ingestion:

Do NOT induce vomiting. Give two glasses of water to dilute if patient is conscious. Get medical attention.

5. FIRE FIGHTING MEASURES**Extinguishing media:**

☐ Water

☒ Carbon dioxide

☒ Dry chemical

☒ Foam

☐ Alcohol foam

Flash Point (°F): > 400

Method: estimate

Explosive limits in air (percent) -- Lower: n/d

Upper: n/d

Special firefighting procedures:

Firefighters should wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers with water.

Unusual fire and explosion hazards:

Heating above 300 deg F in the presence of air may cause slow oxidative decomposition and above 500 deg F may cause polymerization. Personnel in vicinity and downwind should be evacuated.

Hazardous products of combustion:

When heated to decomposition it emits fumes of Cl-, carbon monoxide, other fumes and vapors varying in composition and toxicity.

6. ACCIDENTAL RELEASE MEASURES**Spill control:**

Avoid personal contact. Eliminate ignition sources. Ventilate area.

Containment:

Dike, contain and absorb with clay, sand or other suitable material.

Cleanup:

For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly. Flush area with water to remove trace residue.

Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters.

7. HANDLING AND STORAGE**Handling precautions:**

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing and protective gear before reuse. Discard contaminated leather articles.

Handle mixed resin and hardener in accordance with the potential hazard of the curing agent used. Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against nuisance dust during sanding/grinding of cured product.

Storage:

Store in a cool, dry area away from high temperatures and flames. Keep containers closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Engineering controls****Ventilation :**

Local exhaust ventilation is preferred although good general mechanical ventilation is usually adequate for most industrial applications. Local exhaust is recommended for confined areas.

Other engineering controls :

Have emergency shower and eye wash available.

Personal protective equipment**Eye and face protection:**

Safety glasses with side shields.

Skin protection:

Chemical-resistant gloves and other gear as required to prevent skin contact.

Respiratory protection:

None needed in normal use with proper ventilation. In poorly ventilated areas use NIOSH approved organic vapor cartridge respirator for uncured resin, dust/particle respirator during grinding/sanding operations for cured resin, or fresh airline respirator as exposure levels dictate (see OSHA 1910.134).

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	1.7	Boiling point (°F):	>500
Melting point (°F):	n/d	Vapor density (air = 1):	>1
Vapor pressure (mmHg):	0.03 mm Hg at 171 °F	Evaporation rate (butyl acetate = 1):	<<1
VOC (grams/liter):	0	Solubility in water:	Negligible
Percent volatile by volume:	0	pH (5% solution or slurry in water):	neutral
Percent solids by weight:	100		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid :

Open flame and extreme heat

Incompatible materials:

Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines).

Hazardous products of decomposition:

Oxides of carbon; aldehydes, acids and other organic substances may be formed during combustion or elevated temperature (>500 deg F) degradation.

Conditions under which hazardous polymerization may occur:

Heat is generated when resin is mixed with curing agents; Run-a-way cure reactions may char and decompose the resin, generating unidentified fumes and vapors which may be toxic.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): Not available.

Acute dermal effects: LD50 (rabbit): Not available.

Acute inhalation effects: LC50 (rat): Not available.

Exposure: 8 hours.

Subchronic effects:

Not available.

Carcinogenicity, teratogenicity, and mutagenicity:

1) **MUTAGENICITY:** Liquid resins based on diglycidyl ether of Bisphenol A (DGEBA), have proved to be inactive when tested by in vivo mutagenicity assays. These resins have shown activity in in vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. The significance of these tests to man is unknown. 2) **CARCINOGENICITY:** Recent 2-year bioassays in rats and mice exposed by the dermal route to DGEBA yielded no evidence of carcinogenicity to the skin or any other organs. This study clarifies prior equivocal

results from a 2-year mouse skin painting study, which were suggestive, but not conclusive, for weak carcinogenic activity. 3) The International Agency for Research on Cancer (IARC) concluded that DGEBA is not classifiable as a carcinogen (IARC group 3), that is human and animal evidence of carcinogenicity is inadequate. Crystalline silica has been shown to exhibit in vitro mutagenic effects in non-human mammalian cells and in human cells.

Other chronic effects:

Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure. Studies have shown bisphenol A diglycidyl ether resin to cause allergic contact dermatitis. Respirable crystalline quartz may cause chronic lung injury (silicosis). Acute or rapid silicosis may occur in a short period of time in heavy exposure in certain occupations such as sandblasters. Silicosis is a form of disabling pulmonary fibrosis which can be progressive and may lead to death. Pulmonary function may be reduced by inhalation of respirable crystalline silica. It may produce lung scarring which may lead to a progressive massive fibrosis, increasing susceptibility to pulmonary tuberculosis. Progressive massive fibrosis may be accompanied by right heart enlargement, heart failure, and pulmonary failure. Smoking aggravates the effects of exposure.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Crystalline silica	n/d	n/d	n/d
Cresyl glycidyl ether	2500 mg/kg	> 2300 mg/kg	6100 mg/l
Bisphenol A diglycidyl ether resin	11.4 g/kg	>20 ml/kg	no deaths

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

No data available.

Mobility and persistence:

No data available.

Environmental fate:

No data available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

If this resin becomes a waste, it would not be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

Proper shipping name: Non-regulated
Technical name : N/A
Hazard class : N/A
UN number: N/A
Packing group: N/A
Emergency Response Guide no.: N/A
IMDG page number: N/A
Other: N/A

15. REGULATORY INFORMATION**U.S. Federal Regulations****TSCA**

All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:

None

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Crystalline silica	No	No	0.0	Not required
Cresyl glycidyl ether	No	No	0.0	Required
Bisphenol A diglycidyl ether resin	No	No	0.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -

Canadian regulations

WHMIS hazard class(es) : D2B; D2A

16. OTHER INFORMATION

Hazardous Materials
Identification System (HMIS)
ratings:

Health**2*****Flammability****1****Reactivity****1**

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.

 **Technologies**

Revision Date: 01/09/2004

Issue date: 01/09/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite (R) Urethane Sealant Grey
Product type: Sealant
Company address:
Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item number: 39916 / IDH No. 223407
Region: United States
Contact Information:
Telephone: (860) 571-5100
Emergency telephone: (860) 571-5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Calcium carbonate 1317-65-3	10-30	10 mg/m ³ TWA (particulate matter containing no asbestos and <1% crystalline silica)	15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction)	None
Stoddard solvent 8052-41-3	10-30	100 ppm TWA	2900 mg/m ³ TWA 500 ppm TWA	None
Calcium oxide 1305-78-8	5-10	2 mg/m ³ TWA	5 mg/m ³ (TWA)	None
Titanium dioxide 13463-67-7	5-10	10 mg/m ³ TWA	15 mg/m ³ TWA (total dust)	None
Talc 14807-96-6	5-10	2 mg/m ³ TWA (respirable fraction, particulate matter containing no asbestos and <1% crystalline silica)	20 mppcf	50 ppm
Silica, quartz 14808-60-7	1-5	0.05 mg/m ³ TWA (respirable fraction)	0.1 mg/m ³ TWA (respirable)	None
Toluene Diisocyanate 26471-62-5	0-0.1	None	None	None

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW****HMIS:**

Physical state: Paste
Color: Grey
Odor: Solvent

HEALTH: 2
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

WARNING: MAY CAUSE ALLERGIC SKIN REACTION.
CAUSES EYE IRRITATION.
MAY BE HARMFUL IF INHALED.

Relevant routes of exposure: Eye contact, Skin contact, Inhalation

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause irritation to nose and throat.
Skin contact: Repeated or prolonged skin contact may result in allergic sensitization.
Eye contact: Moderate eye irritation.
Ingestion: May cause irritation to the gastrointestinal tract, mouth and mucous membranes.

Item number: 39916 / IDH No. 223407

Product name: Loctite (R) Urethane Sealant Grey

Existing conditions aggravated by exposure:

Skin disorders. Respiratory disorders.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Skin contact: Remove contaminated clothing and shoes. Wash with soap and water. Get medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Drink 1 or 2 glasses of water. Get medical attention immediately. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position.

5. FIRE-FIGHTING MEASURES

Flash point: 49.48°C (121°F) (Non-combustible solid by ASTM method)

Autoignition temperature: Not determined

Flammable/Explosive limits-lower %: 1.0 %

Flammable/Explosive limits-upper %: 7.0 %

Extinguishing media: Carbon dioxide (CO2). Dry chemical. Water fog.

Special fire fighting procedures: Use water spray to keep fire exposed containers cool. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: In the event of fire, cool tanks with water spray. Do not store or use near heat, spark, open flame or other sources of ignition. Isolate from heat, electrical equipment, sparks, and open flame.

Hazardous combustion products: Oxides of carbon. Acrid smoke and fumes.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Do not allow material to contaminate ground water system.

Clean-up methods: Soak up with inert absorbent. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling: Use only with adequate ventilation. Keep out of the reach of children. Make sure containers are properly grounded before use or transfer of material.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

Incompatible products: Not available

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

Item number: 39916 / IDH No. 223407

Product name: Loctite (R) Urethane Sealant Grey

Skin protection: Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

Eye/face protection: Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Paste
Color: Grey
Odor: Solvent
Vapor pressure: <2 mmHg at 25 °C (77 °F)
pH: Not applicable
Boiling point/range: 115.6-282.4°C (240-540°F)
Melting point/range: Not available
Specific gravity: 1.18
Vapor density: Heavier than air
Evaporation rate: Less than butyl acetate.
Solubility in water: Slightly soluble
Partition coefficient (n-octanol/water): Not available
VOC content: 9.407%; 111 grams/liter

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Hazardous polymerization: Will not occur.

Hazardous decomposition products: Oxides of carbon.

Incompatibility: Strong bases. Oxidizing agents. Strong Lewis acids. Strong mineral acids.

Conditions to avoid: Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Product toxicity data: CHRONIC HAZARDS: This product contains solvents. Reports associate repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage. Reports also indicate that solvents cause liver damage, kidney damage, and mucous membrane irritation. Be warned that intentional misuse by deliberately inhaling the vapors and/or the product contents may be harmful or fatal. This product contains a small amount of Toluene Diisocyanate (<0.1%). Prolonged or repeated exposure to isocyanates can lead to skin sensitization. Exposure to small amounts of isocyanates can cause reddening, swelling, and blisters for sensitized persons. Prolonged or repeated exposure to isocyanates can lead to respiratory sensitization. In such individuals, prolonged or repeated exposure below the TLV can produce chemical asthma.

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Calcium carbonate	No	No	No
Stoddard solvent	No	No	No
Calcium oxide	No	No	No
Titanium dioxide	No	No	No
Talc	No	No	No
Silica, quartz	Known Carcinogen	Group 1	Yes
Toluene Diisocyanate	Suspect Carcinogen	Group 2B	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Calcium carbonate	Nuisance dust
Stoddard solvent	Central nervous system, Irritant
Calcium oxide	Irritant, Eyes, Corrosive
Titanium dioxide	Irritant, Respiratory
Talc	Some evidence of carcinogenicity, Lung, Irritant
Silica, quartz	Some evidence of carcinogenicity, Lung, Immune system
Toluene Diisocyanate	Allergen, Bone Marrow, Corrosive, Eyes, Irritant, Mutagen, Respiratory, Some evidence of carcinogenicity

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose according to EPA and local governmental regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA):

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG):

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None
Marine pollutant: None known

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None.

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: None above reporting de minimus.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Toluene (CAS# 108-88-3). Silica, Quartz (CAS# 14808-60-7). Toluene diisocyanate (CAS# 26471-62-5).

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections:
Revised to new format.

Prepared by:

Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

Material Safety Data Sheet

24 Hour Emergency Phone Numbers:

Medical: 1-800-327-3874

1-513-558-5111

Transportation:

1-800-535-5053

1-352-323-3500

.....
 •NOTE: National Response Center emergency numbers to be used
 •only in the event of chemical emergencies involving a spill, leak,
 •fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
 Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
 Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere.

Product Name: FAST N FINAL PREMIUM
Product UPC Number: 7079812140, 7079812141, 7079812142,
 7079812143, 7079812145, 7079812146,
 7079812147, 7079812148, 7079812149,
 7079823030, 7079823050, 7079823090,
 7079871354
Product Use/Class: RTU Spackle/Wallboard Repair
Manufacturer: DAP Inc.
 2400 Boston Street Suite 200
 Baltimore, MD 21224-4723
 888-327-8477 (non-emergency matters)

Revision Date: 01/31/2006

Supercedes: 07/08/2003

MSDS Number: 00010410001

Section 2 - Composition / Information On Ingredients

Chemical Name	CASRN	WT%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Sodium silicate glass	1344-09-8	10-30	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Ethylene glycol	107-21-1	0.5-1.5	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No
Vinyl acetate	108-05-4	0.1-1.0	10 PPM	15 PPM	N.E.	N.E.	N.E.	N.E.	No
Formaldehyde	50-00-0	<0.004	N.E.	N.E.	0.3 PPM	0.75 PPM	2 PPM	N.E.	No
Acetaldehyde	75-07-0	<0.002	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	No

Exposure Notes:

50-00-0 Formaldehyde is a specially regulated substance for which an OSHA chemical-specific exposure standard exists. Detailed information regarding this substance may be found in 29 CFR 1910.1048. Medical surveillance information regarding this substance may be found in Appendix C to 29 CFR 1910.1048.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices

Section 3 - Hazards Identification

Emergency Overview: A white to off-white paste with a slight sweet odor. CAUTION! May cause eye, skin, nose, throat and respiratory tract irritation. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation. May cause dry skin.

Effects Of Overexposure - Inhalation: Harmful if inhaled. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). Inhalation of dust may cause lung damage or other adverse pulmonary and respiratory effects.

Effects Of Overexposure - Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Effects Of Overexposure - Chronic Hazards:

Formaldehyde vapor is a known animal carcinogen according to OSHA and NTP and is considered possibly carcinogenic to humans by inhalation. The International Agency for Research on Cancer considers formaldehyde to be a human carcinogen.

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals. This product contains vinyl acetate which is classified as a class 2B carcinogen by IARC. Vinyl acetate was found to cause cancer in the respiratory tract of laboratory animals. There is no evidence that vinyl acetate causes cancer in humans. The IARC published a monograph on vinyl acetate (1995). In this monograph, IARC indicates "there is inadequate evidence in humans for carcinogenicity of vinyl acetate. There is limited evidence in experimental animals for the carcinogenicity of vinyl acetate." Normally, this lack of conclusive evidence would place a substance in the IARC 3 classification (not classified as a human carcinogen). However, because vinyl acetate is metabolized to acetaldehyde, which has an IARC 2B (possibly carcinogenic to humans) classification, it also has been listed under Category 2B. Prolonged, repeated, or high exposures may cause weakness and depression of the central nervous system.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation

Medical Conditions which May be Aggravated by Exposure: If dry sanded, asthma and asthma-like conditions may worsen from prolonged or repeated exposure to dust.

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: Call a physician or Poison Control Center immediately. Do not induce vomiting.

Note to Physician: None.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arises from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Flash Point, F: Greater than 200 degrees
Method: (Seta Closed Cup)

Lower Explosive Limit, %: Not Established
Upper Explosive Limit, %: Not Established

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: None known.

Special Firefighting Procedures: Cool fire-exposed containers using water spray.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Scrape up dried material and place into containers.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! Do not breathe vapors. Wash thoroughly after handling. Avoid excessive heat and handling. Do not breathe dust. While dry sanding, use of a NIOSH-approved dust mask is recommended. Avoid contact with eyes, skin and clothing. Removal of this product after use will result in the generation of Dust. If dry-sanded, exposure to dust may result in the build-up of material in eyes, ears, nose, and mouth which may cause irritation.

Storage: Store away from caustics and oxidizers. Do not store at temperatures above 120 degrees F. Keep tightly closed. Avoid excessive heat and freezing.

Section 8 - Exposure Controls / Personal Protection

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits. Wet sanding is recommended to avoid generation of dust. Prevent build-up of dust and vapors by opening windows and doors or use other means to ensure fresh air entry during application, drying and sanding.

Respiratory Protection: A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary. Use an approved NIOSH/OSHA respirator if dry sanded.

Skin Protection: Wear gloves with repeated or prolonged use.

Eye Protection: Safety glasses with side-shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Remove and wash contaminated clothing before re-use.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Not Established
Odor:	Slight Sweet	Odor Threshold:	Not Established
Appearance:	White to Off-White	Evaporation Rate:	Not Established
Solubility in H₂O:	Not Established	Specific Gravity:	0.478
Freeze Point:	Not Established	pH:	Between 7.0 and 12.0
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste		

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products: Normal decomposition products, i.e., CO_x, NO_x.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under normal conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50	WT%
107-21-1	Ethylene glycol	Rat:4700 mg/kg	Rat:10876 mg/kg	0.5-1.5
108-05-4	Vinyl acetate	-----	Rat:11400 mg/m3/4H	0.1-1.0
50-00-0	Formaldehyde	-----	Rat:203 mg/m3	<0.004
75-07-0	Acetaldehyde	-----	Rat:13300 ppm/4H	<0.002

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP	WT%
108-05-4	Vinyl acetate	Confirmed animal carcinogen with unknown relevance to humans.	Not Listed.	Possible carcinogen.	Not Listed.	0.1-1.0
50-00-0	Formaldehyde	Suspected human carcinogen.	Potential cancer hazard.	Human carcinogen.	Anticipated carcinogen.	<0.004
75-07-0	Acetaldehyde	Confirmed animal carcinogen with unknown relevance to humans.	Not Listed.	Possible carcinogen.	Anticipated carcinogen.	<0.002

Significant Data with Possible Relevance to Humans: This product contains trace amounts of free formaldehyde. OSHA and NTP identify formaldehyde as a potential carcinogen. IARC identifies formaldehyde as a human carcinogen. Formaldehyde has been shown to cause mutations in a variety of in-vitro test systems, the

significance of which to humans is unknown. In a two-year inhalation study, rats showed carcinogenic effects in the respiratory system at 15 ppm of formaldehyde. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of formaldehyde below the recommended exposure limits. Maintain adequate ventilation to prevent exposure above current OSHA / ACGIH exposure limits. Workplace monitoring of the air to define formaldehyde exposure levels may be necessary.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	N.A.	DOT UN/NA Number:	None

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number	WT%
Ethylene glycol	107-21-1	0.5-1.5
Vinyl acetate	108-05-4	0.1-1.0

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if

exported from the United States:

None.

U.S. State Regulations

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number	WT%
Water	7732-18-5	30-60
Acetic acid, vinyl ester, polymer	Proprietary	10-30
Sodium Borate, Boric Acid, Sodium Salt	7775-19-1	1-5

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number	WT%
Water	7732-18-5	30-60
Acetic acid, vinyl ester, polymer	Proprietary	10-30
Sodium Borate, Boric Acid, Sodium Salt	7775-19-1	1-5

California Proposition 65:

Warning: The following ingredients present in the product are known to the State of California to cause cancer:

Chemical Name	CAS Number	Definition	Date Listed	WT%
Formaldehyde	50-00-0	Carcinogenic.	Listed: January 1, 1988	<0.004
Acetaldehyde	75-07-0	Carcinogenic.	Listed: April 1, 1988	<0.002

Warning: The following ingredients present in the product are known to the State of California to cause birth defects or other reproductive harm:

None.

Section 16 - Other Information

HMIS Ratings:

Health: 1

Flammability: 1

Reactivity: 0

Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 9.5 LB/GAL: 0.1 WT%: 1.485

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established

SARA – Superfund Amendments and Reauthorization Act of 1986

N.D. – Not Determined

NJRTK – New Jersey Right-to-Know Law

VOC – Volatile Organic Compound

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

HMIS – Hazardous Materials Identification System

TLV – Threshold Limit Value

NTP – National Toxicology Program

STEL – Short Term Exposure Limit

CEIL – Ceiling Exposure Limit

LD50 – Lethal Dose 50

LC50 – Lethal Concentration 50

F – Degree Fahrenheit



C – Degree Celsius

MSDS – Material Safety Data Sheet

CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

	Material Safety Data Sheet		24 Hour Emergency Phone Numbers: Medical/Poison Control: 1-800-327-3874 1-513-558-5111 Transportation/National Response Center: 1-800-535-5053 1-352-323-3500
			<p>.....</p> <p>•NOTE: The National Response Center emergency numbers to be used • •only in the event of chemical emergencies involving a spill, leak, fire, • •exposure or accident involving chemicals. •</p> <p>.....</p>
<p>IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.</p>			
<p>Section 1 - Chemical Product / Company Information</p>			

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
 On peut demander cette fiche signalétique (MSDS) à la langue française-canadienne.
 Los Datos de Seguridad del Producto pueden obtenerse en Español si lo requiere.

Product Name:	Phenomenal Patch-N-Paint Lightweight Spackling	Revision Date:	08/15/2007
Product UPC Number:	070798015029, 070798015111, 070798015173	Supercedes:	05/11/2006
Product Use/Class:	RTU Spackle/Wallboard Repair	MSDS Number:	00079942005
Manufacturer:	PHENOMENAL BRANDS Phenopatch Products A Division of DAP Products Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 410-779-3265 (non-emergency matters)		

Section 2 - Hazards Identification

Emergency Overview: A white to off-white paste product with a very slight ammonia odor. **WARNING!** May cause eye, skin, nose, throat and respiratory tract irritation. Removal of this product after use or by dry sanding will generate dust and exposure to this dust may be irritating to the eyes, ears, nose and mouth. Harmful by inhalation and if swallowed. If dry-sanded, exposure to dust may result in build-up of material in eyes, ears, nose, and mouth. This product contains ethylene glycol.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: Direct eye contact may cause irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation. May cause dry skin.

Effects Of Overexposure - Inhalation: Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). Inhalation of dust may cause lung damage or other adverse pulmonary and respiratory effects.

Effects Of Overexposure - Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Effects Of Overexposure - Chronic Hazards:

Ethylene Glycol may cause kidney and liver damage upon prolonged and repeated overexposures. Studies have shown that repeated inhalation of ethylene glycol has produced adverse cardiovascular changes in laboratory animals. Ethylene glycol has been shown to cause birth defects in laboratory animals.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation

Medical Conditions which May be Aggravated by Exposure: If dry sanded, asthma and asthma-like conditions may worsen from prolonged or repeated exposure to dust.

Carcinogenicity:

None.

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Sodium silicate glass	1344-09-8	10-30
Sodium Borate; Boric Acid, Sodium Salt	7775-19-1	1-5
Ethylene glycol	107-21-1	0.5-1.5

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water.

First Aid - Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

First Aid - Ingestion: Call a physician or Poison Control Center immediately. Do not induce vomiting.

Note to Physician: None.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arises from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Extinguishing Media: Alcohol, Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: None known.

Special Firefighting Procedures: Cool fire-exposed containers using water spray.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Scrape up dried material and place into containers.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! Avoid contact with skin and eyes. Do not breathe dust. While dry sanding, use of a NIOSH-approved dust mask is recommended. Removal of this product after use will result in the generation of Dust. If dry-sanded, exposure to dust may result in the build-up of material in eyes, ears, nose, and mouth which may cause irritation. Avoid excessive heat and handling. Wash thoroughly after handling.

Storage: Avoid excessive heat and freezing. Do not store at temperatures above 120 degrees F. Keep tightly closed. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Sodium silicate glass	1344-09-8	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Sodium Borate: Boric Acid, Sodium Salt	7775-19-1	2 MGM3	6 MGM3	N.E.	N.E.	N.E.	N.E.	No
Ethylene glycol	107-21-1	N.E.	N.E.	100 MGM3	N.E.	N.E.	N.E.	No

Exposure Notes:

None.

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits. Prevent build-up of dust and vapors by opening windows and doors or use other means to ensure fresh air entry during application, drying and sanding. Wet sanding is recommended to avoid generation of dust.

Respiratory Protection: If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Use an approved NIOSH/OSHA respirator if dry sanded.

Skin Protection: Wear gloves with repeated or prolonged use.

Eye Protection: Safety glasses with side-shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Very Slight Ammonia	Odor Threshold:	Not Established
Color:	White to Off-White	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	Specific Gravity:	0.4
Freeze Point:	Not Established	pH:	Between 7.0 and 12.9
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste	Flammability:	Non-Flammable
Flash Point, F:	Greater than 200 degrees	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Established	Upper Explosive Limit, %:	Not Established

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under normal conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50
107-21-1	Ethylene glycol	Rat: 4700 mg/kg	Rat: 10876 mg/kg

Significant Data with Possible Relevance to Humans: None

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): none

Section 14 - Transportation Information

DOT Proper Shipping Name: Not Regulated
DOT Technical Name: N.A.
DOT Hazard Class: N.A.

Packing Group: N.A.
Hazard Subclass: N.A.
DOT UN/NA Number: None

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the

Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Water	7732-18-5
Acrylic polymer	non-haz polymer

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Water	7732-18-5
Acrylic polymer	non-haz polymer

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 5.4 **lb/gal:** 0.0 **wt:wt%:** 0.9

Volatile Organic Compounds (VOC), less water less exempts, less LVP -VOCs: **wt:wt%:** 0.1

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established

SARA – Superfund Amendments and Reauthorization Act of 1986

N.D. – Not Determined

NJRTK – New Jersey Right-to-Know Law

VOC – Volatile Organic Compound

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

HMIS – Hazardous Materials Identification System

TLV – Threshold Limit Value

NTP – National Toxicology Program

CEIL – Ceiling Exposure Limit

STEL – Short Term Exposure Limit

LD50 – Lethal Dose 50

LC50 – Lethal Concentration 50

F – Degree Fahrenheit

MSDS – Material Safety Data Sheet

C – Degree Celsius

CASRN – The Chemical Abstracts Service Registry Number

PHENOMENAL BRANDS believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>



PRODUCTS COMPANY

P.O. Box 1300 TRENTON, NJ 08607

TEL. (609) 394-0150 FAX (609) 989-4847

Material Safety Data Sheet

MSDS Date: 5/9/07
Product Name: X-PANDO PIPE JOINT COMPOUND
Manufacturer: X-Pando Products Company

1. Product and Company Description

X-Pando Products Company
500 Southard Street
Trenton, NJ 08638

For Product Emergency/Information:
609-394-0150

Product Use:
Sealant for threaded and flanged pipe

2. Hazards Identification

Emergency Overview

Appearance/Odor: Gray to Black powder with no odor.

Potential Health Effects:

Acute Eye:

May cause mechanical irritation if exposed to large amounts of the dust.

Acute Skin:

This product may cause skin irritation.

Acute Inhalation:

May cause irritation to respiratory tract and lung damage if exposure is repeated or prolonged. Although unlikely, inhalation of fumes from heated material may cause metal fume fever, a flu-like illness characterized by delayed symptoms of cough, muscle pains chills and nausea.

Acute ingestion:

This product may cause gastrointestinal harm and nausea if it is swallowed.

Chronic Exposure:

Prolonged or repeated skin contact may cause burns. Prolonged inhalation of dust may lead to lung damage (pneumoconiosis). Symptoms include coughing, difficulty breathing, and the production of black sputum. Symptoms may be delayed until after years of exposure.

Aggravation of Pre-existing Conditions:

Individuals with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation should be precluded from exposure.

3. Hazardous Chemical Composition

Component	CAS#	%
Magnesium Oxide	1309-48-4	10-30
Graphite (synthetic)	7782-42-5	7-13
Magnesium Chloride	7791-18-6	15-40
Calcium Carbonate	1317-65-3	15-40
Starch Gum	9004-53-9	1-5
Non Hazardous Ingredients	NA	Balance

4. First Aid Measures

First Aid Measures for Accidental:

Eye Exposure:

Irrigate eyes with large amounts of water for at least 15 minutes, while holding the eyelid(s) open. Seek medical attention if irritation persists.

Skin Exposure:

Wash the affected area with soap and water. Seek medical attention if irritation persists.

Inhalation:

Move victim to fresh air and treat symptomatically.

Ingestion:

Contact local poison control center or physician IMMEDIATELY.

5. Fire Fighting Measures

Fire Hazard Data:

Autoignition: N/A

Flash Point: N/A

Flammability Limits (vol/vol%):

Lower:
N/A

Upper:
N/A

Extinguishing Media:

Use medium suitable for surrounding material.

Special Fire Fighting Procedures:

Firefighters should wear full fire-fighting turn-out gear (full Bunker gear) including NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Unusual Fire and Explosion Hazards:

Fire produces oxides of magnesium, calcium and carbon.

6. Accidental Release Measures

Cleanup and Disposal of Spill:

Vacuum or scoop spilled material and place in closed containers for disposal. Avoid dust generation. Dispose of waste in accordance with local, state and federal regulations.

7. Handling and Storage

Handling/Storage:

Avoid dust generation and wear proper personal protection equipment as identified in Section 8. Store in a closed container in dry area.

8. Exposure Controls / Personal Protection

Exposure Guidelines:

Component	ACGIH	OSHA-PELs
Magnesium Oxide	10 mg/m ³	15 mg/m ³ 5 mg/m ³ respirable dust
Graphite (synthetic)	2 mg/m ³	2 mg/m ³
Magnesium Chloride	5 mg/m ³	15 mg/m ³
Calcium Carbonate	10 mg/m ³	15 mg/m ³ 5 mg/m ³ respirable dust
Starch Gum	10 mg/m ³	15 mg/m ³
Non Hazardous Ingredients	NA	NA

Engineering Controls:

Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS.

Respiratory Protection:

If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces.

Eye / Face Protection:

Chemical splash goggles or safety glasses. Emergency eye wash stations and showers should be available within the work area.

Skin Protection:

Wear chemical resistant, impervious gloves for routine industrial use. Use body protection appropriate for task. An apron or other impermeable body protection is suggested. Full-body chemical protective clothing is recommended for emergency response procedures.

9. Physical and Chemical Properties

Physical Appearance: Gray to Black powder

Odor: None

pH: NA

Specific Gravity/Density: 2.56

Water Solubility: Appreciable

Melting Point: N/A
Freezing Point: ND
Boiling Point: N/A
Vapor Pressure: ND
Percent Volatiles by Volume: ND
Evaporation Rate: ND
Viscosity: ND
Flash Point: N/A
Explosion Limits: Lower: N/A
Upper: N/A
Autoignition Temp: N/A

10. Stability and Reactivity

Chemical Stability:
Stable

Conditions to Avoid:
Dust generation

Materials / Chemicals to Be Avoided:
Avoid contact with strong acids and strong bases.

Hazardous Decomposition Products:
Hazardous decomposition products such as hydrogen chloride, chlorine and magnesium oxide fumes may develop with exposure to high temperatures.

Hazardous Polymerization:
Will not occur.

11. Toxicological Information

Acute Effects
For Magnesium Oxide: LD50 Mouse: 810 mg/kg

For Magnesium Chloride: LD50 Rat: 8100 mg/kg

Chronic Effects
Carcinogenicity: Not identified as a carcinogen by NTP, IARC or OSHA
Mutagenicity: No Data
Reproductive Effects: No Data
Developmental Effects: No Data

12. Ecological Information

Environmental Fate:
No information found

Environmental Toxicity:
No information found

13. Disposal Considerations

Waste Disposal Method:

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transportation Information

US Department of Transportation Shipping Name:

US Department of Transportation	Proper Shipping Name	Not regulated
	Hazard Class	Not regulated
	ID Number	Not regulated
	Packing Group	Not regulated

15. Regulatory Information

Federal Regulations:

SARA Title III Hazard Classes:

Fire Hazard: No
Reactive Hazard: No
Release of Pressure: No
Acute Health Hazard: No
Chronic Health Hazard: No

TSCA

All components of this product are on the TSCA inventory or are exempt from TSCA Inventory requirements

U.S. State Regulations:

California Prop 65 List: None

Canada Regulations:

Classification: D2

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

National Fire Protection Association NFPA(R) and Hazardous Materials Identification System (HMIS) Hazard Ratings –:

Health Hazard: 1
Flammability: 0
Reactivity: 0

Key Legend Information:

N/A – Not Applicable

ND – Not Determined

ACGIH – American Conference of
Governmental Industrial Hygienists

OSHA – Occupational Safety and Health
Administration

TLV – Threshold Limit Value

IDLH – Immediately Dangerous to Life and
Health

PEL – Permissible Exposure Limit

TWA – Time Weighted Average

STEL – Short Term Exposure Limit

NTP – National Toxicology Program

IARC – International Agency for Research on
Cancer

ITEM: 4KM87 - SEALANT URETHANE

PICK REQ: 1009471874

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A6050

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A6050

A. d Grainger Item: 4KM87 - SEALANT URETHANE

LOCTITE(R*)

HENKEL TECHNOLOGIES

MATERIAL SAFETY DATA SHEET

REVISION DATE: 01/09/2004

ISSUE DATE: 01/09/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: LOCTITE(R) URETHANE SEALANT GREY

ITEM NUMBER: 39916

PRODUCT TYPE: SEALANT

REGION: UNITED STATES

COMPANY ADDRESS:
HENKEL LOCTITE CORPORATION
1001 TROUT BROOK CROSSING
ROCKY HILL, CONNECTICUT 06067CONTACT INFORMATION:
TELEPHONE: 860.571.5100
EMERGENCY TELEPHONE: 860.571.5100
INTERNET: WWW.LOCTITE.COM

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	%	ACSH TLV	OSHA PEL	OTHER
CALCIUM CARBONATE 1317-65-3	10-30	10 MG/M3 TWA (PARTICULATE MATTER CONTAINING NO ASBESTOS AND <1% CRYSTALLINE SILICA)	15 MG/M3 TWA (TOTAL DUST) 5 MG/M3 TWA (RESPIRABLE FRACTION)	NONE
STODDARD SOLVENT 8050-41-3	10-30	100 PPM TWA	2900 MG/M3 TWA 500 PPM TWA	NONE
OXIDE 8	5-10	2 MG/M3 TWA	5 MG/M3 (TWA)	NONE
TITANIUM DIOXIDE 13463-67-7	5-10	10 MG/M3 TWA	15 MG/M3 TWA (TOTAL DUST)	NONE
TALC 14807-96-6	5-10	2 MG/M3 TWA (RESPIRABLE FRACTION, PARTICULATE MATTER CONTAINING NO ASBESTOS AND <1% CRYSTALLINE SILICA)	20 MPPCF	50 PPM
SILICA, QUARTZ 14808-60-7	1-5	0.05 MG/M3 TWA (RESPIRABLE FRACTION)	0.1MG/M3 TWA (RESPIRABLE)	NONE
TOLUENE DIISOCYANATE 26471-62-5	0-0.1	NONE	NONE	NONE

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

PHYSICAL STATE: PASTE

COLOR: GREY

ODOR: SOLVENT

HMIS:

HEALTH: 2

FLAMMABILITY: 1

PHYSICAL HAZARD: 0

PERSONAL PROTECTION: SEE SECTION 8

WARNING:

MAY CAUSE ALLERGIC SKIN REACTION.

CAUSES EYE IRRITATION.

MAY BE HARMFUL IF INHALED.

RELEVANT ROUTES OF EXPOSURE: EYE CONTACT, SKIN CONTACT, INHALATION

POTENTIAL HEALTH EFFECTS:

INHALATION:

HARMFUL IF INHALED. MAY CAUSE IRRITATION TO NOSE AND THROAT.

CONTACT:

OR PROLONGED SKIN CONTACT MAY RESULT IN ALLERGIC SENSITIZATION.

EYE CONTACT: MODERATE EYE IRRITATION.

INGESTION:

MAY CAUSE IRRITATION TO THE GASTROINTESTINAL TRACT, MOUTH AND MUCOUS

MEMBRANES.

EXISTING CONDITIONS AGGRAVATED BY EXPOSURE:
SKIN DISORDERS. RESPIRATORY DISORDERS.

SEE SECTION 11 FOR ADDITIONAL TOXICOLOGICAL INFORMATION.

4. FIRST AID MEASURES

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:

REMOVE CONTAMINATED CLOTHING AND SHOES. WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION.

EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITTING. DRINK 1 OR 2 GLASSES OF WATER. GET MEDICAL ATTENTION IMMEDIATELY. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF A PERSON VOMITS WHEN LYING ON HIS BACK, PLACE HIM IN THE RECOVERY POSITION.

5. FIRE-FIGHTING MEASURES

FLASH POINT:

49.48 DEG. C (121 DEG. F) (NON-COMBUSTIBLE SOLID BY ASTM METHOD)

AUTOIGNITION TEMPERATURE: NOT DETERMINED

FLAMMABLE/EXPLOSIVE LIMITS-LOWER %: 1.0 %

FLAMMABLE/EXPLOSIVE LIMITS-UPPER %: 7.0 %

EXTINGUISHING MEDIA: CARBON DIOXIDE (CO2). DRY CHEMICAL. WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

USE WATER SPRAY TO KEEP FIRE EXPOSED CONTAINERS COOL. WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING, SUCH AS TURN-OUT GEAR.

UNUSUAL FIRE OR EXPLOSION HAZARDS:

IN THE EVENT OF FIRE, COOL TANKS WITH WATER SPRAY. DO NOT STORE OR USE NEAR HEAT, SPARK, OPEN FLAME OR OTHER SOURCES OF IGNITION. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAME.

HAZARDOUS COMBUSTION PRODUCTS: OXIDES OF CARBON. ACRID SMOKE AND FUMES.

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS:

DO NOT ALLOW MATERIAL TO CONTAMINATE GROUND WATER SYSTEM.

CLEAN-UP METHODS:

SOAK UP WITH INERT ABSORBENT. STORE IN A CLOSED CONTAINER UNTIL READY FOR DISPOSAL.

7. HANDLING AND STORAGE

HANDLING:

USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN. MAKE SURE CONTAINERS ARE PROPERLY GROUNDED BEFORE USE OR TRANSFER OF MATERIAL.

STORAGE:

KEEP IN A COOL, WELL VENTILATED AREA AWAY FROM HEAT, SPARKS AND OPEN FLAME. KEEP CONTAINER TIGHTLY CLOSED UNTIL READY FOR USE.

INCOMPATIBLE PRODUCTS: NOT AVAILABLE

FOR INFORMATION ON PRODUCT SHELF LIFE CONTACT HENKEL LOCTITE CUSTOMER SERVICE AT (800) 243-4874.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

USE LOCAL EXHAUST VENTILATION TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW ESTABLISHED EXPOSURE LIMITS.

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED AIR-PURIFYING RESPIRATOR IF THE POTENTIAL TO EXCEED ESTABLISHED EXPOSURE LIMITS EXISTS.

SKIN PROTECTION:

USE CHEMICAL RESISTANT, IMPERMEABLE CLOTHING INCLUDING GLOVES AND EITHER AN APRON OR BODY SUIT TO PREVENT SKIN CONTACT.

EYE/FACE PROTECTION: SAFETY GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.

SEE SECTION 2 FOR EXPOSURE LIMITS.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: PASTE

COLOR: GREY

ODOR: SOLVENT

VAPOR PRESSURE: <2 MMHG AT 25 DEG. C (77 DEG. F)

PH: NOT APPLICABLE

BOILING POINT/RANGE: 115.6-282.4 DEG. C (240-540 DEG. F)

MELTING POINT/RANGE: NOT AVAILABLE

SPECIFIC GRAVITY: 1.18

VAPOR DENSITY: HEAVIER THAN AIR

EVAPORATION RATE: LESS THAN BUTYL ACETATE.

SOLUBILITY IN WATER: SLIGHTLY SOLUBLE

DISTRIBUTION COEFFICIENT (N-OCTANOL/WATER): NOT AVAILABLE

VOL. CONTENT:

9.40%

111 GRAMS/LITER

10. STABILITY AND REACTIVITY

STABILITY: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON.

INCOMPATIBILITY:

STRONG BASES. OXIDIZING AGENTS. STRONG LEWIS ACIDS. STRONG MINERAL ACIDS.

CONDITIONS TO AVOID: PROLONGED EXPOSURE TO HEAT.

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICITY DATA:

CHRONIC HAZARDS:

THIS PRODUCT CONTAINS SOLVENTS. REPORTS ASSOCIATE REPEATED AND PROLONGED OCCUPATIONAL EXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. REPORTS ALSO INDICATE THAT SOLVENTS CAUSE LIVER DAMAGE, KIDNEY DAMAGE, AND MUCOUS MEMBRANE IRRITATION. BE WARNED THAT INTENTIONAL MISUSE BY DELIBERATELY INHALING THE VAPORS AND/OR THE PRODUCT CONTENTS MAY BE HARMFUL OR FATAL. THIS PRODUCT CONTAINS A SMALL AMOUNT OF TOLUENE DIISOCYANATE (<0.1%). PROLONGED OR REPEATED EXPOSURE TO ISOCYANATES CAN LEAD TO SKIN SENSITIZATION. EXPOSURE TO SMALL AMOUNTS OF ISOCYANATES CAN CAUSE REDDENING, SWELLING, AND BLISTERS FOR SENSITIZED PERSONS. PROLONGED OR REPEATED EXPOSURE TO ISOCYANATES CAN LEAD TO RESPIRATORY SENSITIZATION. IN SUCH INDIVIDUALS, PROLONGED OR REPEATED EXPOSURE BELOW THE TLV CAN PRODUCE CHEMICAL ASTHMA.

CARCINOGEN STATUS:

HAZARDOUS COMPONENTS	NTP CARCINOGEN	IARC CARCINOGEN	OSHA CARCINOGEN
CALCIUM CARBONATE	NO	NO	NO
STODDARD SOLVENT	NO	NO	NO
CALCIUM OXIDE	NO	NO	NO
TITANIUM DIOXIDE	NO	NO	NO
QUARTZ	KNOWN CARCINOGEN	GROUP 1	YES
TOLUENE DIISOCYANATE	SUSPECT CARCINOGEN	GROUP 2B	NO

LITERATURE REFERENCED TARGET ORGAN & OTHER HEALTH EFFECTS:

HAZARDOUS COMPONENTS HEALTH EFFECTS/TARGET ORGANS

CALCIUM CARBONATE NUISANCE DUST

STODDARD SOLVENT CENTRAL NERVOUS SYSTEM, IRRITANT

CALCIUM OXIDE IRRITANT, EYES, CORROSIVE

TITANIUM DIOXIDE IRRITANT, RESPIRATORY

TALC SOME EVIDENCE OF CARCINOGENICITY, LUNG, IRRITANT

SILICA, QUARTZ SOME EVIDENCE OF CARCINOGENICITY, LUNG, IMMUNE SYSTEM

TOLUENE DIISOCYANATE ALLERGEN, BONE MARROW, CORROSIVE, EYES, IRRITANT, MUTAGEN, RESPIRATORY, SOME EVIDENCE OF CARCINOGENICITY

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: NOT AVAILABLE

13. DISPOSAL CONSIDERATIONS

INFORMATION PROVIDED IS FOR UNUSED PRODUCT ONLY.

RECOMMENDED METHOD OF DISPOSAL:

DISPOSE ACCORDING TO EPA AND LOCAL GOVERNMENTAL REGULATIONS.

EPA HAZARDOUS WASTE NUMBER: NOT A RCRA HAZARDOUS WASTE.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION GROUND (49 CFR):

PROPER SHIPPING NAME: NOT REGULATED

HAZARD CLASS OR DIVISION: NONE

IDENTIFICATION NUMBER: NONE

PACKING GROUP: NONE

INTERNATIONAL AIR TRANSPORTATION (ICAO/IATA):

SHIPPING NAME: NOT REGULATED

CLASS OR DIVISION: NONE

IDENTIFICATION NUMBER: NONE

PACKING GROUP: NONE

WATER TRANSPORTATION (IMO/IMDG):

PROPER SHIPPING NAME: NOT REGULATED

HAZARD CLASS OR DIVISION: NONE

IDENTIFICATION NUMBER: NONE

PACKING GROUP: NONE

MARINE POLLUTANT: NONE KNOWN

15. REGULATORY INFORMATION

UNITED STATES REGULATORY INFORMATION:

TSCA 8 (B) INVENTORY STATUS:

ALL COMPONENTS ARE LISTED OR ARE EXEMPT FROM LISTING ON THE TOXIC SUBSTANCES CONTROL ACT INVENTORY.

TSCA 12 (B) EXPORT NOTIFICATION: NONE.

CERCLA/SARA SECTION 302 EHS: NONE.

CERCLA/SARA SECTION 311/312:

IMMEDIATE HEALTH HAZARD, DELAYED HEALTH HAZARD

CERCLA/SARA 313: NONE ABOVE REPORTING DE MINIMUS.

CALIFORNIA PROPOSITION 65:

THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. TOLUENE (CAS# 108-88-3). SILICA, QUARTZ (CAS# 14808-60-7). TOLUENE DIISOCYANATE (CAS# 26471-62-5).

CANADA REGULATORY INFORMATION:

CEPA DSL/NDSL STATUS:

ALL COMPONENTS ARE LISTED ON OR ARE EXEMPT FROM LISTING ON THE DOMESTIC SUBSTANCES LIST.

WHMIS HAZARD CLASS: D.2.B

16. OTHER INFORMATION

THIS MATERIAL SAFETY DATA SHEET CONTAINS CHANGES FROM THE PREVIOUS VERSION IN SECTIONS: REVISED TO NEW FORMAT.

PREPARED BY: GARY PIERSON, HEALTH AND REGULATORY AFFAIRS SPECIALIST

DISCLAIMER:

THE DATA CONTAINED HEREIN ARE FURNISHED FOR INFORMATION ONLY AND ARE BELIEVED TO BE RELIABLE. HOWEVER, HENKEL LOCTITE CORPORATION DOES NOT ASSUME RESPONSIBILITY FOR ANY RESULTS OBTAINED BY PERSONS OVER WHOSE METHODS HENKEL LOCTITE CORPORATION HAS NO CONTROL. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF HENKEL LOCTITE'S PRODUCTS OR ANY PRODUCTION METHODS MENTIONED HEREIN FOR A PARTICULAR PURPOSE, AND TO ADOPT SUCH PRECAUTIONS AS MAY BE ADVISABLE FOR THE PROTECTION OF PROPERTY AND PERSONS AGAINST ANY HAZARDS THAT MAY BE INVOLVED IN THE HANDLING AND USE OF ANY OF HENKEL LOCTITE CORPORATION'S PRODUCTS. IN LIGHT OF THE FOREGOING, HENKEL LOCTITE CORPORATION SPECIFICALLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARISING FROM SALE OR USE OF HENKEL LOCTITE CORPORATION'S PRODUCTS. HENKEL LOCTITE CORPORATION FURTHER DISCLAIMS ANY LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND, INCLUDING LOST PROFITS.

ITEM NUMBER: 39916

PRODUCT NAME: LOCTITE(R) URETHANE SEALANT GREY

ITEM: 5E203 - Lubricant 8 Oz

Copper
Anti-Seize

PICK REQ: 1024516452

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A7448

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A7448

Ed Grainger Item: 5E203 - Lubricant 8 Oz

LOCTITE(R*)

MATERIAL SAFETY DATA SHEET

HENKEL TECHNOLOGIES

REVISION DATE: 01/07/2004

ISSUE DATE: 01/07/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CS-A(R*) COPPER BASED ANTI-SEIZE LUBRICANT

ITEM NUMBER: 51147

PRODUCT TYPE: LUBRICANT

REGION: UNITED STATES

COMPANY ADDRESS:
HENKEL LOCTITE CORPORATION
1001 TROUT BROOK CROSSING
ROCKY HILL, CONNECTICUT 06067CONTACT INFORMATION:
TELEPHONE: 860.571.5100
EMERGENCY TELEPHONE: 860.571.5100
INTERNET: WWW.LOCTITE.COM

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	%	ACGIH TLV
PETROLEUM DISTILLATES	30-60	5 MG/M3 TWA (MIST) 10 MG/M3 STEL (MIST)
COPPER 7440-50-8	10-30	0.2 MG/M3 TWA (FUME) 1 MG/M3 TWA (DUSTS AND MISTS, AS Cu)
GRAPHITE 7782-42-5	10-30	2 MG/M3 TWA (RESPIRABLE FRACTION, ALL FORMS EXCEPT GRAPHITE FIBERS)
QUARTZ 13-7	1-5	0.05 MG/M3 TWA (RESPIRABLE FRACTION)
HAZARDOUS COMPONENTS	OSHA PEL	OTHER
PETROLEUM DISTILLATES	5 MG/M3 TWA (MIST)	NONE
COPPER 7440-50-8	0.1 MG/M3 TWA (FUME) 1 MG/M3 TWA (DUSTS AND MISTS)	NONE
GRAPHITE 7782-42-5	15 MG/M3 (TOTAL), 5 MG/M3 (RESPIRABLE)	NONE
SILICA, QUARTZ 14808-60-7	0.1 MG/M3 TWA (RESPIRABLE)	NONE

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

PHYSICAL STATE: PASTE

COLOR: COPPER

ODOR: MILD PETROLEUM

HMIS:
HEALTH: 1
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
PERSONAL PROTECTION: SEE SECTION 8

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

RELEVANT ROUTES OF EXPOSURE: SKIN, EYES

POTENTIAL HEALTH EFFECTS:

INHALATION:
THIS PRODUCT HAS LOW VOLATILITY AND IS NOT EXPECTED TO CAUSE RESPIRATORY TRACT IRRITATION DURING NORMAL CONDITIONS OF USE. MAY CAUSE RESPIRATORY TRACT IRRITATION. INHALATION OF COPPER FUMES MAY RESULT IN METAL FUME FEVER. SYMPTOMS INCLUDE METALLIC TASTE, DISCOLORATION OF SKIN OR HAIR.

SKIN CONTACT: PROLONGED OR REPEATED CONTACT MAY CAUSE IRRITATION.

EYE CONTACT: CONTACT WITH EYES WILL CAUSE IRRITATION.

INGESTION:
MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND
PRINCIPAL HAZARD OF INGESTION IS ASPIRATION INTO THE LUNGS AND
PNEUMONITIS.EXISTING CONDITIONS AGGRAVATED BY EXPOSURE:
EYE, SKIN, AND RESPIRATORY DISORDERS.

SEE SECTION 11 FOR ADDITIONAL TOXICOLOGICAL INFORMATION.

4. FIRST AID MEASURES

INHALATION:
REMOVE TO FRESH AIR. IF DISCOMFORT PERSISTS SEEK MEDICAL ATTENTION.SKIN CONTACT:
WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IF SYMPTOMS DEVELOP AND PERSIST.EYE CONTACT:
IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.INGESTION:
DO NOT INDUCE VOMITING. ASPIRATION MAY CAUSE PULMONARY EDEMA AND PNEUMONITIS. OBTAIN MEDICAL ATTENTION.

5. FIRE-FIGHTING MEASURES

FLASH POINT: GREATER THAN 93 DEG. C (200 DEG. F) PENSLEY MARTENS CLOSED CUP
AUTOIGNITION TEMPERATURE: NOT DETERMINEDFLAMMABLE/EXPLOSIVE LIMITS-LOWER %: NOT DETERMINED
FLAMMABLE/EXPLOSIVE LIMITS-UPPER %: NOT DETERMINEDEXTINGUISHING MEDIA:
CARBON DIOXIDE (CO2), DRY CHEMICAL, FOAM, WATER SPRAY.

SPECIAL FIRE FIGHTING PROCEDURES: NONE

UNUSUAL FIRE OR EXPLOSION HAZARDS: NONE

HAZARDOUS COMBUSTION PRODUCTS: OXIDES OF CARBON.

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS:
DO NOT ALLOW MATERIAL TO CONTAMINATE GROUND WATER SYSTEM.CLEAN-UP METHODS:
SCRAPE UP AS MUCH MATERIAL AS POSSIBLE. CLEAN RESIDUE WITH SOAP AND WATER.
DISPOSE OF IN ACCORDANCE WITH LOCAL AND NATIONAL REGULATIONS.

7. HANDLING AND STORAGE

HANDLING:
KEEP CONTAINER CLOSED. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. WASH THOROUGHLY AFTER HANDLING.

STORAGE: KEEP IN A COOL, WELL VENTILATED AREA.

INCOMPATIBLE PRODUCTS: OXIDIZING AGENTS.

FOR INFORMATION ON PRODUCT SHELF LIFE CONTACT HENKEL LOCTITE CUSTOMER SERVICE AT (800) 243-4874.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:
ENSURE ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION IS RECOMMENDED WHEN GENERAL VENTILATION IS NOT SUFFICIENT TO CONTROL AIRBORNE CONTAMINATION BELOW OCCUPATIONAL EXPOSURE LIMITS.RESPIRATORY PROTECTION:
USE NIOSH APPROVED RESPIRATOR IF THERE IS POTENTIAL TO EXCEED EXPOSURE LIMIT(S). OBSERVE OSHA REGULATIONS FOR RESPIRATORY USE (29 CFR 1910.134).SKIN PROTECTION:
COVER AS MUCH OF THE EXPOSED SKIN AREA AS POSSIBLE WITH APPROPRIATE CLOTHING.

EYE/FACE PROTECTION: SAFETY GLASSES WITH SIDE-SHIELDS. GOGGLES.

SEE SECTION 2 FOR EXPOSURE LIMITS.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: PASTE

COLOR: COPPER

ODOR: MILD PETROLEUM

VAPOR PRESSURE: NOT DETERMINED

pH: NOT APPLICABLE

BOILING POINT/RANGE: 228-2324 DEG. C (550-4215 DEG. F)

MELTING POINT/RANGE: NOT AVAILABLE

SPECIFIC GRAVITY: 1.3017

VAPOR DENSITY: HEAVIER THAN AIR

EVAPORATION RATE: NOT DETERMINED

SOLUBILITY IN WATER: INSOLUBLE

PARTITION COEFFICIENT (N-OCTANOL/WATER): NOT DETERMINED

VOC CONTENT: ESSENTIALLY ZERO

10. STABILITY AND REACTIVITY

STABILITY: STABLE AT NORMAL CONDITIONS

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON. HYDROCARBONS

STABILITY: OXIDIZING AGENTS. STRONG ACIDS AND STRONG BASES.

NS TO AVOID: PROLONGED EXPOSURE TO HEAT

11. TOXICOLOGICAL INFORMATION

CARCINOGEN STATUS:

HAZARDOUS COMPONENTS	NTP CARCINOGEN	IARC CARCINOGEN	OSHA CARCINOGEN
PETROLEUM DISTILLATES	NO	NO	NO
COPPER	NO	NO	NO
GRAPHITE	NO	NO	NO
SILICA, QUARTZ	KNOWN CARCINOGEN	GROUP 1	YES

LITERATURE REFERENCED TARGET ORGAN & OTHER HEALTH EFFECTS:

HAZARDOUS COMPONENTS	HEALTH EFFECTS/TARGET ORGANS
PETROLEUM DISTILLATES	IRRITANT
COPPER	SKIN, SENSORY, MUTAGEN, LIVER, KIDNEY, IRRITANT, IMMUNE SYSTEM, GASTROINTESTINAL, CENTRAL NERVOUS SYSTEM, BLOOD, ALLERGEN, DEVELOPMENTAL
GRAPHITE	LUNG
SILICA, QUARTZ	SOME EVIDENCE OF CARCINOGENICITY, LUNG, IMMUNE SYSTEM

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: NOT AVAILABLE

13. DISPOSAL CONSIDERATIONS

INFORMATION PROVIDED IS FOR UNUSED PRODUCT ONLY.

RECOMMENDED METHOD OF DISPOSAL:

DISPOSE OF ACCORDING TO FEDERAL, STATE AND LOCAL GOVERNMENTAL REGULATIONS.

EPA HAZARDOUS WASTE NUMBER: NOT A RCRA HAZARDOUS WASTE.

14. TRANSPORT INFORMATION

SHIPPING CLASSIFICATIONS IN THIS SECTION ARE FOR NON-BULK PACKAGING ONLY (OTHERWISE SPECIFIED). SHIPPING CLASSIFICATION MAY BE DIFFERENT FOR BULKING.

U.S. DEPARTMENT OF TRANSPORTATION GROUND (49 CFR):

PROPER SHIPPING NAME: NOT REGULATED

HAZARD CLASS OR DIVISION: NONE

IDENTIFICATION NUMBER: NONE

PACKING GROUP: NONE

DOT REPORTABLE QUANTITY (LBS):

COPPER (CAS# 7440-50-8) IS REPORTABLE AT 5000 POUNDS (2700 KG)

MARINE POLLUTANT: COPPER

INTERNATIONAL AIR TRANSPORTATION (ICAO/IATA):

PROPER SHIPPING NAME: NOT REGULATED

HAZARD CLASS OR DIVISION: NONE

IDENTIFICATION NUMBER: NONE

PACKING GROUP: NONE

WATER TRANSPORTATION (IMO/IMDG):

PROPER SHIPPING NAME:

ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (COPPER)

HAZARD CLASS OR DIVISION: 9

IDENTIFICATION NUMBER: UN 3082

PACKING GROUP: III

MARINE POLLUTANT: COPPER

15. REGULATORY INFORMATION

UNITED STATES REGULATORY INFORMATION:

TSCA 8 (B) INVENTORY STATUS:

ALL COMPONENTS ARE LISTED OR ARE EXEMPT FROM LISTING ON THE TOXIC SUBSTANCES CONTROL ACT INVENTORY.

TSCA 12 (B) EXPORT NOTIFICATION: NONE.

CERCLA/SARA SECTION 302 EHS: NONE.

CERCLA/SARA SECTION 311/312: IMMEDIATE HEALTH HAZARD

CERCLA/SARA 313:

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 (40 CFR 372). COPPER (CAS# 7440-50-8).

CALIFORNIA PROPOSITION 65:

NO CALIFORNIA PROPOSITION 65 LISTED CHEMICALS ARE KNOWN TO BE PRESENT.

CANADA REGULATORY INFORMATION:

ENVIRONMENTAL STATUS:

COMPONENTS ARE LISTED ON OR ARE EXEMPT FROM LISTING ON THE DOMESTIC SUBSTANCES LIST.

WHMIS HAZARD CLASS: D.2.A, D.2.B

16. OTHER INFORMATION

THIS MATERIAL SAFETY DATA SHEET CONTAINS CHANGES FROM THE PREVIOUS VERSION IN SECTIONS: NEW MATERIAL SAFETY DATA SHEET FORMAT.

PREPARED BY: C.J. MICHAELS, SENIOR HEALTH & REGULATORY AFFAIRS SPECIALIST

DISCLAIMER:

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ITEM NUMBER: 51147

PRODUCT NAME: CS-A (R*) COPPER BASED ANTI-SEIZE LUBRICANT

ITEM: 4ZF24 - Oil Diesel Engine

Delvac 1300

PICK REQ: 1023372214

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A7215

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A7215

Associated Grainger Item: 4ZF24 - Oil Diesel Engine

EXXONMOBIL

440693-00 MOBIL DELVAC 1300 SUPER 15W-40

MATERIAL SAFETY DATA BULLETIN

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOBIL DELVAC 1300 SUPER 15W-40

SUPPLIER:
EXXONMOBIL OIL CORPORATION
3225 GALLOWAY RD.
FAIRFAX, VA 22037

24 - HOUR HEALTH AND SAFETY EMERGENCY (CALL COLLECT): 609-737-4411

24 - HOUR TRANSPORTATION EMERGENCY:

CHEMTREC:
800-424-9300
202-483-7616

LUBES AND FUELS: 281-834-3296

PRODUCT AND TECHNICAL INFORMATION:

LUBRICANTS AND SPECIALTIES:
800-662-4525
800-443-9966

FUELS PRODUCTS: 800-947-9147

MSDS FAX ON DEMAND: 613-228-1467

MSDS INTERNET WEBSITE: [HTTP://WWW.MSDS.IHSOLUTIONS.COM/](http://www.msds.ihsolutions.com/)

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: SEVERE TREAT MIN. OILS & ADDITIVES

GLOBALLY REPORTABLE MSDS INGREDIENTS:

SYNOPSIS NAME	APPROX. WT %
DITHIOLIC ACID, O,O-DI-C1-14-ALKYL	1-5
ZINC SALT (2:1) ZDDP	
(b) -42-3	

SEE SECTION 8 FOR EXPOSURE LIMITS (IF APPLICABLE).

3. HAZARDS IDENTIFICATION

UNDER NORMAL CONDITIONS OF USE, THIS PRODUCT IS NOT CONSIDERED HAZARDOUS ACCORDING TO REGULATORY GUIDELINES (SEE SECTION 15).

EMERGENCY OVERVIEW: BROWN LIQUID.

DOT ERG NO.: NA

POTENTIAL HEALTH EFFECTS:

UNDER NORMAL CONDITIONS OF INTENDED USE, THIS PRODUCT DOES NOT POSE A RISK TO HEALTH. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY IRRITATION.

FOR FURTHER HEALTH EFFECTS/TOXICOLOGICAL DATA, SEE SECTION 11.

4. FIRST AID MEASURES

EYE CONTACT:
FLUSH THOROUGHLY WITH WATER. IF IRRITATION OCCURS, CALL A PHYSICIAN.

SKIN CONTACT:
WASH CONTACT AREAS WITH SOAP AND WATER. REMOVE AND CLEAN OIL SOAKED CLOTHING DAILY AND WASH AFFECTED AREA. (SEE SECTION 16 - INJECTION INJURY)

INHALATION:
NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF RESPIRATORY IRRITATION, DIZZINESS, NAUSEA, OR UNCONSCIOUSNESS OCCURS DUE TO EXCESSIVE VAPOR OR MIST EXPOSURE, SEEK IMMEDIATE MEDICAL ASSISTANCE. IF BREATHING HAS STOPPED, ASSIST VENTILATION WITH A MECHANICAL DEVICE OR MOUTH-TO-MOUTH RESUSCITATION.

INGESTION:
NOT EXPECTED TO BE A PROBLEM. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS. DO NOT INDUCE VOMITING.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:
WATER OR FOAM MAY CAUSE FROTHING. USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURE. PREVENT FIRE FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS, SEWERS, OR WATER SUPPLY.

SPECIAL PROTECTIVE EQUIPMENT:
FOR FIRES IN ENCLOSED AREAS, FIRE FIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE.

COMBUSTION PRODUCTS:
FUMES, SMOKE, CARBON MONOXIDE, SULFUR OXIDES, ALDEHYDES AND OTHER DECOMPOSITION PRODUCTS, IN THE CASE OF INCOMPLETE COMBUSTION.

FLASH POINT C(F): 230 (446) (ASTM D-92).

FLAMMABLE LIMITS (APPROX. % VOL. IN AIR):

LEL: 0.9%

UEL: 7.0%

NFPA HAZARD ID:

HEALTH

FLAMMABILITY 1

REACTIVITY 0

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES:
REPORT SPILLS/RELEASES AS REQUIRED TO APPROPRIATE AUTHORITIES. U.S. COAST GUARD AND EPA REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS/RELEASES THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL/RELEASE TO COAST GUARD NATIONAL RESPONSE CENTER TOLL FREE NUMBER (800) 424-8802. IN CASE OF ACCIDENT OR ROAD SPILL NOTIFY CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

LAND SPILL:
SHUT OFF SOURCE TAKING NORMAL SAFETY PRECAUTIONS. TAKE MEASURES TO MINIMIZE THE EFFECTS ON GROUND WATER. RECOVER BY PUMPING OR CONTAIN SPILLED MATERIAL WITH SAND OR OTHER SUITABLE ABSORBENT AND REMOVE MECHANICALLY INTO CONTAINERS. IF NECESSARY, DISPOSE OF ADSORBED RESIDUES AS DIRECTED IN SECTION 13.

WATER SPILL:
CONFINE THE SPILL IMMEDIATELY WITH BOOMS. WARN OTHER SHIPS IN THE VICINITY. NOTIFY PORT AND OTHER RELEVANT AUTHORITIES. REMOVE FROM THE SURFACE BY SKIMMING OR WITH SUITABLE ABSORBENTS. IF PERMITTED BY REGULATORY AUTHORITIES THE USE OF SUITABLE DISPERSANTS SHOULD BE CONSIDERED WHERE RECOMMENDED IN LOCAL OIL SPILL PROCEDURES.

ENVIRONMENTAL PRECAUTIONS:
PREVENT MATERIAL FROM ENTERING SEWERS, WATER SOURCES OR LOW LYING AREAS; ADVISE THE RELEVANT AUTHORITIES IF IT HAS, OR IF IT CONTAMINATES SOIL/VEGETATION.

PERSONAL PRECAUTIONS: SEE SECTION 8

7. HANDLING AND STORAGE

HANDLING:
NO SPECIAL PRECAUTIONS ARE NECESSARY BEYOND NORMAL GOOD HYGIENE PRACTICES. SEE SECTION 8 FOR ADDITIONAL PERSONAL PROTECTION ADVICE WHEN HANDLING THIS PRODUCT.

STORAGE:
KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT STORE IN OPEN OR UNLABELLED CONTAINERS. STORE AWAY FROM STRONG OXIDIZING AGENTS AND COMBUSTIBLE MATERIALS. DO NOT STORE NEAR HEAT, SPARKS, FLAME OR STRONG OXIDANTS.

SPECIAL PRECAUTIONS: PREVENT SMALL SPILLS AND LEAKAGES TO AVOID SLIP HAZARD.

EMPTY CONTAINER WARNING:
EMPTY CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. DO NOT ATTEMPT TO REFILL OR CLEAN CONTAINER SINCE RESIDUE IS DIFFICULT TO REMOVE. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNDED AND PROMPTLY RETURNED TO A DRUM RECONDITIONER. ALL CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:

WHEN MISTS/AEROSOLS CAN OCCUR, THE FOLLOWING ARE RECOMMENDED:
5 MG/M3 (AS OIL MIST) - ACGIH THRESHOLD LIMIT VALUE (TLV)
10 MG/M3 (AS OIL MIST) - ACGIH SHORT TERM EXPOSURE LIMIT (STEL)
5 MG/M3 (AS OIL MIST) - OSHA PERMISSIBLE EXPOSURE LIMIT (PEL)

VENTILATION:
IF MISTS ARE GENERATED, USE ADEQUATE VENTILATION, LOCAL EXHAUST OR ENCLOSURES TO CONTROL BELOW EXPOSURE LIMITS.

RESPIRATORY PROTECTION:
IF MISTS ARE GENERATED, AND/OR WHEN VENTILATION IS NOT ADEQUATE, WEAR APPROVED RESPIRATOR.

EYE PROTECTION:
IF EYE CONTACT IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS OR CHEMICAL TYPE GOGGLES SHOULD BE WORN.

SKIN PROTECTION:
NOT NORMALLY REQUIRED. WHEN SPLASHING OR LIQUID CONTACT CAN OCCUR FREQUENTLY, WEAR OIL RESISTANT GLOVES AND/OR OTHER PROTECTIVE CLOTHING. GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

9. PHYSICAL AND CHEMICAL PROPERTIES

TYPICAL PHYSICAL PROPERTIES ARE GIVEN BELOW. CONSULT PRODUCT DATA SHEET FOR SPECIFIC DETAILS.

APPEARANCE: LIQUID

COLOR: BROWN

ODOR: MILD
ODOR THRESHOLD-PPM: NE
pH: NA
BOILING POINT C(F): >316 (600)
M^p POINT C(F): NA
I INT C(F): 230 (446) (ASIM D-92)

FLAMMABILITY (SOLIDS): NE
AUTO FLAMMABILITY C(F): NA
EXPLOSIVE PROPERTIES: NA
OXIDIZING PROPERTIES: NA
VAPOR PRESSURE-MMHg 20 C: NE
VAPOR DENSITY: NE
EVAPORATION RATE: NE
RELATIVE DENSITY, 15/4 C: 0.877
SOLUBILITY IN WATER: NEGLIGIBLE
PARTITION COEFFICIENT: >3.5

VISCOSITY AT 40 C, CST: 117.0
VISCOSITY AT 100 C, CST: 15.5

POUR POINT C(F): -33 (-27)

FREEZING POINT C(F): NE

VOLATILE ORGANIC COMPOUND: NE

DMSO EXTRACT, IP-346 (WT.%): <3, FOR MINERAL OIL ONLY

NA=NOT APPLICABLE
NE=NOT ESTABLISHED
D=DECOMPOSES

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): STABLE.

CONDITIONS TO AVOID: EXTREME HEAT AND HIGH ENERGY SOURCES OF IGNITION.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

IT DOES NOT DECOMPOSE AT AMBIENT TEMPERATURES.

IS POLYMERIZATION: WILL NOT OCCUR.

11. TOXICOLOGICAL DATA

ACUTE TOXICOLOGY:

ORAL TOXICITY (RATS):

PRACTICALLY NON-TOXIC (LD50: GREATER THAN 2000 MG/KG).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY (RABBITS):

PRACTICALLY NON-TOXIC (LD50: GREATER THAN 2000 MG/KG).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY (RATS):

PRACTICALLY NON-TOXIC (LC50: GREATER THAN 5 MG/L).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

EYE IRRITATION (RABBITS):

PRACTICALLY NON-IRRITATING. (DRAIZE SCORE: GREATER THAN 6 BUT 15 OR LESS).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION (RABBITS):

PRACTICALLY NON-IRRITATING. (PRIMARY IRRITATION INDEX: GREATER THAN 0.5 BUT LESS THAN 3).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

OTHER ACUTE TOXICITY DATA:

ALTHOUGH AN ACUTE INHALATION STUDY WAS NOT PERFORMED WITH THIS PRODUCT, A VARIETY OF MINERAL AND SYNTHETIC OILS, SUCH AS THOSE IN THIS PRODUCT, HAVE BEEN TESTED. THESE SAMPLES HAD VIRTUALLY NO EFFECT OTHER THAN A NONSPECIFIC INFLAMMATORY RESPONSE IN THE LUNG TO THE AEROSOLIZED MINERAL OIL. THE PRESENCE OF ADDITIVES IN OTHER TESTED FORMULATIONS (IN APPROXIMATELY THE SAME AMOUNTS AS IN THE PRESENT FORMULATION) DID NOT ALTER THE OBSERVED EFFECTS.

SUBCHRONIC TOXICOLOGY (SUMMARY):

NO SIGNIFICANT ADVERSE EFFECTS WERE FOUND IN STUDIES USING REPEATED DERMAL APPLICATIONS OF SIMILAR FORMULATIONS TO THE SKIN OF LABORATORY ANIMALS FOR 13 WEEKS AT DOSES SIGNIFICANTLY HIGHER THAN THOSE EXPECTED DURING NORMAL INDUSTRIAL EXPOSURE. THE ANIMALS WERE EVALUATED EXTENSIVELY FOR EFFECTS OF EXPOSURE (HEMATOLOGY, SERUM CHEMISTRY, URINALYSIS, ORGAN WEIGHTS, MICROSCOPIC EXAMINATION OF TISSUES ETC.).

REPRODUCTIVE TOXICOLOGY (SUMMARY):

NO TERATOGENIC EFFECTS WOULD BE EXPECTED FROM DERMAL EXPOSURE, BASED ON LABORATORY DEVELOPMENTAL TOXICITY STUDIES OF MAJOR COMPONENTS IN THIS FORMULATION AND/OR MATERIALS OF SIMILAR COMPOSITION.

TOXICOLOGY (SUMMARY):

AND/OR PROLONGED EXPOSURE MAY CAUSE IRRITATION TO THE SKIN, EYES, NASAL TRACT. OVEREXPOSURE TO OIL MIST MAY RESULT IN OIL DROPLET INHALATION AND/OR GRANULOMA FORMATION.

FOR MINERAL BASE OILS:

BASE OILS IN THIS PRODUCT ARE SEVERELY SOLVENT REFINED AND/OR SEVERELY HYDROTREATED. CHRONIC MOUSE SKIN PAINTING STUDIES OF SEVERELY TREATED OILS

SHOWED NO EVIDENCE OF CARCINOGENIC EFFECTS. THESE RESULTS ARE CONFIRMED ON A CONTINUING BASIS USING VARIOUS SCREENING METHODS SUCH AS MODIFIED AMES TEST, IP-346, AND/OR OTHER ANALYTICAL METHODS.

FOR SYNTHETIC BASE OILS:

THE BASE OILS IN THIS PRODUCT HAVE BEEN TESTED IN THE AMES ASSAY AND OTHER TESTS OF MUTAGENICITY WITH NEGATIVE RESULTS. THESE BASE OILS ARE NOT EXPECTED TO BE CARCINOGENIC WITH CHRONIC DERMAL EXPOSURES.

SENSITIZATION (SUMMARY):

NOT EXPECTED TO BE SENSITIZING BASED ON TESTS OF THIS PRODUCT, COMPONENTS, OR SIMILAR PRODUCTS.

OTHER TOXICOLOGY DATA:

USED GASOLINE ENGINE OILS HAVE SHOWN EVIDENCE OF SKIN CARCINOGENIC ACTIVITY IN LABORATORY TESTS WHEN NO EFFORT WAS MADE TO WASH THE OIL OFF BETWEEN APPLICATIONS. USED OIL FROM DIESEL ENGINES DID NOT PRODUCE THIS EFFECT.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS:

IN THE ABSENCE OF SPECIFIC ENVIRONMENTAL DATA FOR THIS PRODUCT, THIS ASSESSMENT IS BASED ON INFORMATION FOR REPRESENTATIVE PRODUCTS.

ECOTOXICITY:

AVAILABLE ECOTOXICITY DATA (LL50 >1000 MG/L) INDICATES THAT ADVERSE EFFECTS TO AQUATIC ORGANISMS ARE NOT EXPECTED FROM THIS PRODUCT.

MOBILITY:

WHEN RELEASED INTO THE ENVIRONMENT, ADSORPTION TO SEDIMENT AND SOIL WILL BE THE PREDOMINANT BEHAVIOR.

PERSISTENCE AND DEGRADABILITY:

THIS PRODUCT IS EXPECTED TO BE INHERENTLY BIODEGRADABLE.

BIOACCUMULATIVE POTENTIAL:

BIOACCUMULATION IS UNLIKELY DUE TO THE VERY LOW WATER SOLUBILITY OF THIS PRODUCT, THEREFORE BIOAVAILABILITY TO AQUATIC ORGANISMS IS MINIMAL.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED, CONTROLLED BURNER FOR FUEL VALUE. SUCH BURNING MAY BE LIMITED PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT. IN ADDITION, THE PRODUCT IS SUITABLE FOR PROCESSING BY AN APPROVED RECYCLING FACILITY OR CAN BE DISPOSED OF AT AN APPROPRIATE GOVERNMENT WASTE DISPOSAL FACILITY. USE OF THESE METHODS IS SUBJECT TO USER COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS AND CONSIDERATION OF PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

RCRA INFORMATION:

THE UNUSED PRODUCT, IN OUR OPINION, IS NOT SPECIFICALLY LISTED BY THE EPA AS A HAZARDOUS WASTE (40 CFR, PART 261D). NOR IS IT FORMULATED TO CONTAIN MATERIALS WHICH ARE LISTED HAZARDOUS WASTES. IT DOES NOT EXHIBIT THE HAZARDOUS CHARACTERISTICS OF IGNITABILITY, CORROSIVITY, OR REACTIVITY. THE UNUSED PRODUCT IS NOT FORMULATED WITH SUBSTANCES COVERED BY THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP). HOWEVER, USED PRODUCT MAY BE REGULATED.

14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.

RID/ADR: NOT REGULATED BY RID/ADR.

IMO: NOT REGULATED BY IMO.

IATA: NOT REGULATED BY IATA.

STATIC ACCUMULATOR (50 PICOSIEMENS OR LESS): YES

15. REGULATORY INFORMATION

US OSHA HAZARD COMMUNICATION STANDARD:

WHEN USED FOR ITS INTENDED PURPOSES, THIS PRODUCT IS NOT CLASSIFIED AS HAZARDOUS IN ACCORDANCE WITH OSHA 29 CFR 1910.1200.

EU LABELING:

PRODUCT IS NOT DANGEROUS AS DEFINED BY THE EUROPEAN UNION DANGEROUS SUBSTANCES/PREPARATIONS DIRECTIVES. EU LABELING NOT REQUIRED.

GOVERNMENTAL INVENTORY STATUS:

ALL COMPONENTS COMPLY WITH TSCA, EINECS/ELINCS, AICS, METI, DSL, KOREA, AND PHILIPPINES.

U.S. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III:
THIS PRODUCT CONTAINS NO "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312) REPORTABLE HAZARD CATEGORIES: NONE.

THIS PRODUCT CONTAINS THE FOLLOWING SARA (313) TOXIC RELEASE CHEMICALS:

CHEMICAL NAME	CAS NUMBER	CONC.
ZINC DITHIOPHOSPHATE	68649-42-3	1.2%

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
ZINC (ELEMENTAL ANALYSIS) (0.15%)	7440-66-6	22
ZINC DITHIOPHOSPHATE (1.22%)	68649-42-3	18, 20, 21, 22, 24, 25

REGULATORY LISTS SEARCHED:

1=ACGIH ALL
2=ACGIH A1
3=ACGIH A2
4=NTP CARC
5=NTP SUS
6=IARC 1
7=IARC 2A
8=IARC 2B
9=OSHA CARC
10=OSHA 2
11=TSCA 4

12-TSCA 5A2
13-TSCA 5E
14-TSCA 6
15-TSCA 12B
16-CA P65 CARC
17-CA P65 REPRO
18-CA RTK
19-FL RTK
20-RTK
21-RTK
22-RTK
23-RTK
24-RTK
25-PA RTK
26-RI RTK

CODE KEY:
CARC-CARCINOGEN
SUS-SUSPECTED CARCINOGEN
REPRO-REPRODUCTIVE

16. OTHER INFORMATION

USE: COMMERCIAL ENGINE OIL

NOTE:
PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES ARE NOT FORMULATED TO CONTAIN PCBs.

HEALTH STUDIES HAVE SHOWN THAT MANY HYDROCARBONS POSE POTENTIAL HUMAN HEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON. INFORMATION PROVIDED ON THIS MSDS REFLECTS INTENDED USE. THIS PRODUCT SHOULD NOT BE USED FOR OTHER APPLICATIONS. IN ANY CASE, THE FOLLOWING ADVICE SHOULD BE CONSIDERED:

INJECTION INJURY WARNING:
IF PRODUCT IS INJECTED INTO OR UNDER THE SKIN, OR INTO ANY PART OF THE BODY, REGARDLESS OF THE APPEARANCE OF THE WOUND OR ITS SIZE, THE INDIVIDUAL SHOULD BE EVALUATED IMMEDIATELY BY A PHYSICIAN AS A SURGICAL EMERGENCY. EVEN THOUGH INITIAL SYMPTOMS FROM HIGH PRESSURE INJECTION MAY BE MINIMAL OR ABSENT, EARLY SURGICAL TREATMENT WITHIN THE FIRST FEW HOURS MAY SIGNIFICANTLY REDUCE THE ULTIMATE EXTENT OF INJURY.

INDUSTRIAL LABEL:
UNDER NORMAL CONDITIONS OF INTENDED USE, THIS PRODUCT DOES NOT POSE A RISK TO HEALTH. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY IRRITATION. ALWAYS OBSERVE GOOD HYGIENE MEASURES.

FIRST AID:
WASH SKIN WITH SOAP AND WATER. FLUSH EYES WITH WATER. IF OVERCOME BY FUMES OR VAPOR, REMOVE TO FRESH AIR. IF INGESTED DO NOT INDUCE VOMITING. IF SYMPTOMS PERSIST SEEK MEDICAL ASSISTANCE. READ AND UNDERSTAND THE MSDS BEFORE USING THIS PRODUCT.

FOR INTERNAL USE ONLY:
MHC: 1* 1* 1* 1* 1*
MPPEC: A
TRN: 440693-00
CMCS97: 970529
RBO: US - MARKETING
RE: L

ISSUE DATE: 17 JUN 2003

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS. ALTERATION OF THIS DOCUMENT IS STRICTLY PROHIBITED. EXCEPT TO THE EXTENT REQUIRED BY LAW, REPLICATION OR RETRANSMISSION OF THIS DOCUMENT, IN WHOLE OR IN PART, IS NOT PERMITTED. EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES ASSUME NO RESPONSIBILITY FOR ACCURACY OF INFORMATION UNLESS THE DOCUMENT IS THE MOST CURRENT AVAILABLE FROM AN OFFICIAL EXXONMOBIL DISTRIBUTION SYSTEM. EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES NEITHER REPRESENT NOR WARRANT THAT THE FORMAT, CONTENT OR PRODUCT FORMULAS CONTAINED IN THIS DOCUMENT COMPLY WITH THE LAWS OF ANY OTHER COUNTRY EXCEPT THE UNITED STATES OF AMERICA.

PREPARED BY: EXXONMOBIL OIL CORPORATION

ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT, CLINTON, USA

ITEM: 4KK79 - Food Grade Silicone Lubricant 12 0

PICK REQ: 1024516452

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A5875

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A5875

Selected Grainger Item: 4KK79 - Food Grade Silicone Lubricant 12 0

LPS(R*)

LPS LABORATORIES

WHMIS

WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM

SECTION 1 - PRODUCT IDENTIFICATION AND USE

MANUFACTURER'S NAME: LPS LABORATORIES
STREET ADDRESS: 4647 HUGH HOWELL ROAD
CITY, PROVINCE: TUCKER, GA USA 30085-5052

TELEPHONE NUMBER: 770-934-7800
EMERGENCY TELEPHONE NUMBER: 1-613-996-6666 CANUTEC

PRODUCT IDENTIFIER: LPS FOOD GRADE SILICONE LUBRICANT

PRODUCT USE: LUBRICANT AND MOLD RELEASE

PART NUMBERS: C01716

PACKAGING: AEROSOL (284 GRAMS)

WHMIS CLASSIFICATION:

AEROSOL: CLASS A, CLASS B DIV. 5, CLASS D DIV. 2B

SECTION 2 - HAZARDOUS INGREDIENTS

INGREDIENTS	CAS NUMBERS	%W	LC50	LD50	TLV
ISOHEXANE	107-83-5	70-80	N.AV.	N.AV.	500 PPM
n-HEXANE	110-54-3	1-2	N.AV.	32 G/KG*	50 PPM
ISOBUTANE/PROPANE	68476-85-7	20-30	N.AV.	N.AV.	N.AV.
PROPELLANT					

* ACUTE ORAL, RAT

SECTION 3 - PHYSICAL DATA

BOILING POINT (DEG. C): 61 DEG.

PRESSURE @ 37.7 DEG. C (MMHg): 352

DENSITY (AIR=1): APPROX. 3.0

COEFFICIENT OF WATER/OIL DISTRIBUTION: LESS THAN 1

PHYSICAL STATE: THIN LIQUID

ODOR/COLOR: COLORLESS WITH MILD ODOR

ODOR THRESHOLD (PPM): N.AV.

SPECIFIC GRAVITY @ 25 DEG. C (H2O=1): 0.659

EVAPORATION RATE (ETHYL ETHER=1): LESS THAN 1

FREEZING POINT (DEG. C): N.A.P.

pH: N.A.P.

SOLUBILITY IN WATER (% BY WEIGHT): NIL

PERCENT VOLATILE BY VOLUME (%): 96

SECTION 4 - FIRE AND EXPLOSION HAZARD

FLAMMABILITY:

YES (X)

NO ()

PRODUCT WILL IGNITE WHEN EXPOSED TO AN OPEN FLAME.

FLASH POINT: LESS THAN -18 DEG. C

FLAMMABLE LIMITS:

LEL: N.AV.

UEL: N.AV.

AUTOIGNITION TEMPERATURE: N.AV.

EXTINGUISHING MEDIA:

FOAM, DRY CHEMICAL, CARBON DIOXIDE. WATER CAN BE USED TO COOL AEROSOLS.

HAZARDOUS COMBUSTION PRODUCTS: CARBON DIOXIDE AND CARBON MONOXIDE.

SENSITIVITY TO IMPACT: NONE

SENSITIVITY TO STATIC DISCHARGE: YES. SEE SECTION 7.

SPECIAL HAZARDS (INCLUDING EXPLOSION DATA):

HEAT CREATED BY FIRE WILL CAUSE AEROSOLS TO BURST.

SECTION 5 - REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: AVOID SPARKS OR OPEN FLAMES.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:
THERMAL DECOMPOSITION MAY YIELD CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

REACTIVITY AND UNDER WHAT CONDITIONS: NONE KNOWN AT THIS TIME.

SECTION 6 - TOXICOLOGICAL PROPERTIES

PRIMARY ROUTE(S) OF ENTRY: INHALATION, EYES, SKIN.

EXPOSURE LIMITS: NOT ESTABLISHED (SEE SECTION 2).

ACUTE EFFECTS OF OVER EXPOSURE:

INHALATION: HEADACHE, DIZZINESS, NAUSEA AND ANESTHETIC EFFECTS. MAY IRRITATE MUCOSAL TISSUE AT HIGH CONCENTRATION.

EYES: VAPOR AND LIQUID MAY CAUSE IRRITATION.

SKIN: REPEATED OR PROLONGED CONTACT MAY CAUSE DRYING OF SKIN.

INGESTION:

LOW ORDER OF ORAL TOXICATION MINUTE AMOUNTS ASPIRATED INTO LUNGS DURING INGESTION MAY CAUSE SEVERE PULMONARY INJURY.

CHRONIC EFFECTS OF EXPOSURE: NONE KNOWN AT THIS TIME.

CARCINOGENICITY: NONE KNOWN AT THIS TIME.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

PRE-EXISTING EYE, SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED.

OTHER TOXICOLOGICAL PROPERTIES (INCLUDING REPRODUCTIVE TOXICITY, SYNERGISTIC EFFECTS, SENSITIZATION, TERATOGENICITY, MUTAGENICITY):
NONE KNOWN AT THIS TIME.

SECTION 7 - PREVENTIVE MEASURES

HANDS:

USE SOLVENT RESISTANT GLOVES (NITRILE, NEOPRENE) FOR PROLONGED OR REPEATED CONTACT.

EYES: USE FACE SHIELD OR GOGGLES WHEN SPRAYING OR SPLASHING LIQUID.

RESPIRATORY:

NONE REQUIRED IF GOOD VENTILATION IS MAINTAINED. FOR ENCLOSED AREAS, USE AN ORGANIC VAPOR RESPIRATOR OR SELF-CONTAINED BREATHING APPARATUS.

ENGINEERING CONTROLS:

LOCAL EXHAUST IS USUALLY ADEQUATE; HOWEVER, MECHANICAL VENTILATION SHOULD BE USED WHEN SPRAYING IN ENCLOSED AREAS. VAPOR CONCENTRATION SHOULD BE MINIMIZED AS MUCH AS POSSIBLE.

PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL:

VENTILATE AREA BY OPENING WINDOWS AND DOORS. REMOVE IGNITION SOURCES. REMOVE LEAKING CONTAINER AND TRANSFER REMAINING PRODUCT TO ANOTHER VESSEL. FOR LARGE SPILLS, PREVENT PRODUCT FROM GOING INTO SEWERS AND WATER SOURCES BY DIKING OR IMPOUNDING. USE APPROPRIATE SAFETY EQUIPMENT, MOP UP OR SOAK UP WITH ABSORBENT MATERIAL, SUCH AS SAND OR CLAY, AND TRANSFER TO DISPOSAL DRUMS USING NON-SPARKING EQUIPMENT.

WASTE DISPOSAL:

DISPOSE OF IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL, AND FEDERAL REGULATIONS FOR PETROLEUM DISTILLATES. DO NOT INCINERATE AEROSOLS. DO NOT FLUSH TO THE SEWER.

HANDLING AND STORAGE PROCEDURES:

STORE AEROSOLS BELOW 50 DEG. C AND ABOVE 0 DEG. C. STORE AWAY FROM IGNITION SOURCES AND AVOID BREATHING VAPORS. WASH HANDS WITH SOAP AND WATER AFTER USE, OR BEFORE BREAKS AND LUNCH AND AT THE END OF WORK PERIODS. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE REUSE. VAPORS WILL COLLECT IN LOW AREAS, USE AND STORE WITH ADEQUATE VENTILATION. BOND AND GROUND DURING TRANSFER OF LIQUID.

H.M.I.S. LABELING:

HEALTH : 1
FIRE : 3
REACTIVITY : 0
PERSONAL PROTECTION: B

N.P.P.A. LABELING:

HEALTH : 1
FIRE : 3
REACTIVITY: 0

SECTION 8 - EMERGENCY FIRST AID MEASURES

EMERGENCY FIRST AID MEASURES:

INHALATION: MOVE TO FRESH AIR AND CONTACT PHYSICIAN. ADMINISTER OXYGEN IF BREATHING IS DIFFICULT.

EYES: FLUSH WITH COPIOUS AMOUNTS OF COLD WATER AND CONTACT A PHYSICIAN.

SKIN: WASH WITH SOAP AND WATER; THEN APPLY MEDICATED SKIN CREAM.

INGESTION:

DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO LUNGS. CONTACT PHYSICIAN IMMEDIATELY.

SECTION 9 - PREPARATION DATE OF WHMIS

THE FOREGOING TECHNICAL INFORMATION AND RECOMMENDATIONS ARE COMPILED FROM SOURCES THAT ARE BELIEVED TO BE ACCURATE AND RELIABLE. HOWEVER, THEY ARE SUPPLIED WITHOUT WARRANTY OR GUARANTEE OF ANY KIND EITHER EXPRESSED OR

IN THE EVENT THE PURCHASER IS RESPONSIBLE FOR SELECTING AND DETERMINING THE
SUITABILITY OF PRODUCTS FOR PURCHASER'S PARTICULAR NEEDS AND WE DISCLAIM ANY
RESPONSIBILITY FOR IMPROPER APPLICATIONS OR MISUSE OF OUR PRODUCTS IN ANY
MANNER WHATSOEVER.

N.A.V.:
NOT AVAILABLE

N.A.P. - NOT APPLICABLE

31, 2003

GITT, TECHNICAL SERVICES CHEMIST

ED WILLIAMS, MANAGER OF RESEARCH AND DEVELOPMENT

LPS LABORATORIES

ITW

FORM # 2902

WHMIS LPS FOOD GRADE SILICONE LUBRICANT

ITEM: 6Y649 - LUBE 12.5 OZ

Graphite

PICK REQ: 1120898179

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A6165

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A6165

ed Grainger Item: 6Y649 - LUBE 12.5 OZ

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: NATURAL GRAPHITE

MANUFACTURER: SUPERIOR GRAPHITE CO.
ADDRESS: 10 S. RIVERSIDE PLAZA
CHICAGO, IL 60606EMERGENCY PHONE NUMBER: (270) 885-7186
INFORMATION PHONE NUMBER: (312) 559-2999PREPARED:
DATE: 07/16/91
BY: GEORGE RUSSELLREVISED:
DATE: 02/13/2003
BY: CRAIG A. BAER

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	OSHA PEL	ACGIH TLV	OTHER LIMITS	%
GRAPHITE, NATURAL (AS RESPIRABLE DUST)	7782-42-5	2.5 MG/M3	2.0 MG/M3	NONE	PROP.
SILICA, CRYSTALLINE QUARTZ (AS RESPIRABLE DUST)	14808-60-7	0.1 MG/M3	0.05 MG/M3	NONE	N/D

NOTES:
TESTS PERFORMED ON NATURAL GRAPHITE HAVE SHOWN QUARTZ LEVELS RANGING FROM 2% TO 10%.

3. HAZARDS IDENTIFICATION

ROUTE (S) OF ENTRY:
INHALATION: YES
INGESTION: NO
SKIN: YESHAZARDS (ACUTE AND CHRONIC):
INHALATION OF DUST MAY RESULT IN IRRITATION OF MUCOUS MEMBRANES.
LONG TERM INHALATION MAY RESULT IN SILICOSIS OR PNEUMOCONIOSIS.CARCINOGENICITY:
NTP: NO
IARC MONOGRAPHS: YES
OSHA REGULATED: NONOTES:
SILICA AS QUARTZ; ANIMAL SUFFICIENT EVIDENCE, HUMAN SUFFICIENT EVIDENCE.SIGNS AND SYMPTOMS OF EXPOSURE:
NOT KNOWN OTHER THAN THAT MENTIONED IN THE HEALTH HAZARDS.MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
NO MEDICAL CONDITIONS ARE KNOWN TO BE AGGRAVATED BY THIS PRODUCT.

4. FIRST AID MEASURES

EYES: FLUSH THOROUGHLY WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.

SKIN:
WASH EXPOSED SKIN WITH SOAP AND WATER. IF IRRITATION PERSISTS GET MEDICAL ATTENTION. LAUNDRY SEVERELY CONTAMINATED CLOTHING BEFORE REUSE.

INGESTION: DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION.

INHALATION:
REMOVE TO FRESH AIR AREA. IF BREATHING BECOMES DIFFICULT, GET MEDICAL ATTENTION.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD): N/A

FLAMMABLE LIMITS:
LEL: N/A
UEL: N/A

EXTINGUISHING MEDIA: WATER, CARBON DIOXIDE, FOAM OR DRY CHEMICAL.

SPECIAL FIRE FIGHTING PROCEDURES:
WEAR NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS TO FIGHT A FIRE INVOLVING THIS MATERIAL.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

6. ACCIDENTAL RELEASE MEASURES

SPILL/LEAK PROCEDURES:
CAREFULLY SWEEP UP MATERIAL AND WASH FLOOR WITH SOAP AND WATER. CONTAINERIZE FOR SOLID WASTE DISPOSAL.

7. HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS:
KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. GRAPHITE CAUSES SLIPPERY CONDITIONS. GRAPHITE, BEING CONDUCTIVE, CAN CAUSE SHORT CIRCUITS AND OTHER ELECTRICAL MALFUNCTIONS.WORK/HYGIENIC PRACTICES:
WASH EXPOSED SKIN WITH SOAP AND WATER AFTER HANDLING THIS PRODUCT.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE):
USE NIOSH/MSHA APPROVED MASK FOR CHEMICAL PRODUCTS IF ACGIH, OSHA AND/OR TW LIMITS WILL BE EXCEEDED.LOCAL EXHAUST: NOT REQUIRED
MECHANICAL (GENERAL): RECOMMENDED
SPECIAL: NONE
OTHER: NONEEYE/FACE PROTECTION:
SAFETY GLASSES, GOGGLES OR FACE SHIELD. EYE WASH STATION SHOULD BE AVAILABLE.

SKIN PROTECTION: USE COTTON GLOVES. SAFETY SHOWER SHOULD BE AVAILABLE.

9. PHYSICAL/CHEMICAL CHARACTERISTICS

PHYSICAL STATE: SOLID

BOILING POINT: N/A

APPEARANCE: GRAY

MELTING POINT: N/A

ODOR: NONE

VAPOR PRESSURE (MMHg): N/A

SPECIFIC GRAVITY (H2O = 1): 2.25

VAPOR DENSITY (AIR = 1): N/A

WATER SOLUBILITY: INSOLUBLE

EVAPORATION RATE (BUTYL ACETATE = 1): N/A

10. STABILITY AND REACTIVITY

STABILITY: MATERIAL IS STABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):
STRONG OXIDIZING AGENTS, ACIDS AND ALKALIS.HAZARDOUS DECOMPOSITION PRODUCTS:
ON BURNING, MAY RELEASE CARBON DIOXIDE AND CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

11. TOXICOLOGICAL INFORMATION

NONE AVAILABLE.

12. ECOLOGICAL INFORMATION

NONE AVAILABLE

13. DISPOSAL CONSIDERATIONS

DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

14. TRANSPORT INFORMATION

NOT REGULATED.

15. REGULATORY INFORMATION

ALL COMPONENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY.

CANADA:
THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL OF THE INFORMATION REQUIRED BY THE CPR. NATURAL GRAPHITE AND CRYSTALLINE SILICA ARE CLASSIFIED BY CANADIAN WHMIS AS CLASS D, DIVISION 2, SUBDIVISION A (VERY TOXIC MATERIAL CAUSING OTHER EFFECTS).

16. OTHER INFORMATION

DISCLAIMER:
THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS OBTAINED FROM THE USE THEREOF. BECAUSE THE INFORMATION CONTAINED HEREIN MAY BE APPLIED UNDER CONDITIONS BEYOND OUR CONTROL, WE ASSUME NOHazard Rating:
1
LTHY 0
Rst. LTHY 0

NFPA NOTES:

RESPONSIBILITY FOR ITS USE.

UNK. = UNKNOWN
N/A = NOT APPLICABLE
NAV = NOT AVAILABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED
PRC = PROPRIETARY

ITEM: 6Y786 - GREASE 2 NLGI GRADE

PICK REQ: 1024516452

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A3699

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A3699

Selected Grainger Item: 6Y786 - GREASE 2 NLGI GRADE

530147-00 MOBILGREASE CM-P

MATERIAL SAFETY DATA BULLETIN

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOBILGREASE CM-P

SUPPLIER:
EXXONMOBIL OIL CORPORATION
3225 GALLOWAY RD.
FAIRFAX, VA 22037

24 - HOUR HEALTH AND SAFETY EMERGENCY (CALL COLLECT): 609-737-4411
24 - HOUR TRANSPORTATION EMERGENCY:
(PRIMARY) CHEMTREC: 800-424-9300
(SECONDARY): 281-834-3296

PRODUCT AND TECHNICAL INFORMATION:
800-662-4525
703-846-6693

MSDS FAX ON DEMAND: 613-228-1467
OTHER MSDS INFORMATION: 856-224-4644

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: SEVERE TREAT MIN. OILS & ADDITIVES

GLOBALLY REPORTABLE MSDS INGREDIENTS:

SUBSTANCE NAME APPROX. WT%

MOLYBDENUM DISULFIDE 1-5
(1317-33-5)

ZINC DIALKYL DITHIOPHOSPHATE 1-5
(68649-42-3)

OTHER INGREDIENTS:

SUBSTANCE NAME APPROX. WT%

ANTIOXIDANT DIPHENYL AMINES 1-5
(6-1)

SECTION 8 FOR EXPOSURE LIMITS (IF APPLICABLE).

3. HAZARDS IDENTIFICATION

UNDER NORMAL CONDITIONS OF USE, THIS PRODUCT IS NOT CONSIDERED HAZARDOUS
ACCORDING TO REGULATORY GUIDELINES (SEE SECTION 15).

EMERGENCY OVERVIEW: GRAY GREASE.
DOT ERG NO.: NA

POTENTIAL HEALTH EFFECTS:

UNDER NORMAL CONDITIONS OF INTENDED USE, THIS PRODUCT DOES NOT POSE A RISK
TO HEALTH. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY
IRRITATION.

FOR FURTHER HEALTH EFFECTS/TOXICOLOGICAL DATA, SEE SECTION 11.

4. FIRST AID MEASURES

EYE CONTACT:

FLUSH THOROUGHLY WITH WATER. IF IRRITATION OCCURS, CALL A PHYSICIAN.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER. REMOVE AND CLEAN OIL SOAKED
CLOTHING DAILY AND WASH AFFECTED AREA.

INJECTION INJURY WARNING:

IF PRODUCT IS INJECTED INTO OR UNDER THE SKIN, OR INTO ANY PART OF THE
BODY, REGARDLESS OF THE APPEARANCE OF THE WOUND OR ITS SIZE, THE
INDIVIDUAL SHOULD BE EVALUATED IMMEDIATELY BY A PHYSICIAN AS A SURGICAL
EMERGENCY. EVEN THOUGH INITIAL SYMPTOMS FROM HIGH PRESSURE INJECTION MAY
BE MINIMAL OR ABSENT, EARLY SURGICAL TREATMENT WITHIN THE FIRST FEW
HOURS MAY SIGNIFICANTLY REDUCE THE ULTIMATE EXTENT OF INJURY.

INHALATION:

REMOVE FROM FURTHER EXPOSURE. IF RESPIRATORY IRRITATION, DIZZINESS, NAUSEA,
OR UNCONSCIOUSNESS OCCURS, SEEK IMMEDIATE MEDICAL ASSISTANCE. IF BREATHING
HAS STOPPED, ASSIST VENTILATION WITH MECHANICAL DEVICE OR USE
MOUTH-TO-MOUTH RESUSCITATION.

INGESTION:

NOT EXPECTED TO BE A PROBLEM. SEEK MEDICAL ATTENTION IF DISCOMFORT
OCCURS. DO NOT INDUCE VOMITING.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

FIRE FIGHTING PROCEDURES:

FOAM MAY CAUSE FROTHING. USE WATER TO KEEP FIRE EXPOSED CONTAINERS
COOL. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURE. PREVENT
RUNOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS, SEWERS, OR
DRINKING WATER SUPPLY.

SPECIAL PROTECTIVE EQUIPMENT:

FOR FIRES IN ENCLOSED AREAS, FIRE FIGHTERS MUST USE SELF-CONTAINED

BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE.

COMBUSTION PRODUCTS:

FUMES, SMOKE, CARBON MONOXIDE, SULFUR OXIDES, ALDEHYDES AND OTHER
DECOMPOSITION PRODUCTS, IN THE CASE OF INCOMPLETE COMBUSTION.

FLASH POINT C (F): >204 (400) (ESTIMATED FOR OIL, ASTM D-92 (COC)).

FLAMMABLE LIMITS (APPROX. % VOL. IN AIR):

LEL: NE

UEL: NE

NFPA HAZARD ID:

HEALTH: 0

FLAMMABILITY: 1

REACTIVITY: 0

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES:

REPORT SPILLS/RELEASES AS REQUIRED TO APPROPRIATE AUTHORITIES. U.S. COAST
GUARD AND EPA REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS/RELEASES
THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT
SPILL/RELEASE TO COAST GUARD NATIONAL RESPONSE CENTER TOLL FREE NUMBER
(800) 424-8802. IN CASE OF ACCIDENT OR ROAD SPILL NOTIFY
CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

LAND SPILL:

SHUT OFF SOURCE TAKING NORMAL SAFETY PRECAUTIONS. TAKE MEASURES TO MINIMIZE
THE EFFECTS ON GROUND WATER. RECOVER BY PUMPING OR CONTAIN SPILLED MATERIAL
WITH SAND OR OTHER SUITABLE ABSORBENT AND REMOVE MECHANICALLY INTO
CONTAINERS. IF NECESSARY, DISPOSE OF ADSORBED RESIDUES AS DIRECTED IN
SECTION 13.

WATER SPILL:

CONFINE THE SPILL IMMEDIATELY WITH BOOMS. WARN OTHER SHIPS IN THE VICINITY.
NOTIFY PORT AND OTHER RELEVANT AUTHORITIES. REMOVE FROM THE SURFACE BY
SKIMMING OR WITH SUITABLE ABSORBENTS. IF PERMITTED BY REGULATORY
AUTHORITIES THE USE OF SUITABLE DISPERSANTS SHOULD BE CONSIDERED WHERE
RECOMMENDED IN LOCAL OIL SPILL PROCEDURES.

ENVIRONMENTAL PRECAUTIONS:

PREVENT MATERIAL FROM ENTERING SEWERS, WATER SOURCES OR LOW LYING AREAS;
ADVISE THE RELEVANT AUTHORITIES IF IT HAS, OR IF IT CONTAMINATES
SOIL/VEGETATION.

PERSONAL PRECAUTIONS: SEE SECTION 8

7. HANDLING AND STORAGE

HANDLING:

HIGH PRESSURE INJECTION UNDER THE SKIN MAY OCCUR DUE TO THE RUPTURE OF
PRESSURIZED LINES. ALWAYS SEEK MEDICAL ATTENTION. NO SPECIAL PRECAUTIONS
ARE NECESSARY BEYOND NORMAL GOOD HYGIENE PRACTICES. SEE SECTION 8 FOR
ADDITIONAL PERSONAL PROTECTION ADVICE WHEN HANDLING THIS PRODUCT.

STORAGE:

KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT STORE IN OPEN OR UNLABELLED
CONTAINERS. STORE AWAY FROM STRONG OXIDIZING AGENTS AND COMBUSTIBLE
MATERIALS. DO NOT STORE NEAR HEAT, SPARKS, FLAME OR STRONG OXIDANTS.

SPECIAL PRECAUTIONS: PREVENT SMALL SPILLS AND LEAKAGES TO AVOID SLIP HAZARD.

EMPTY CONTAINER WARNING:

EMPTY CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS.
DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH
CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF
IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. DO NOT ATTEMPT TO
REFILL OR CLEAN CONTAINER SINCE RESIDUE IS DIFFICULT TO REMOVE. EMPTY
DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNDED AND PROMPTLY RETURNED
TO A DRUM RECONDITIONER. ALL CONTAINERS SHOULD BE DISPOSED OF IN AN
ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL
REGULATIONS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

SUBSTANCE NAME (CAS-NO.)	TWA		STEL		NOTE
	SOURCE	PPM	MG/M3	PPM	
MOLYBDENUM DISULFIDE (1317-33-5)					
AS Mo SOL CMFDS	OSHA	5			
AS Mo INSOL CMFDS TOT DUST	OSHA	10			
AS Mo SOL CMFDS	ACGIH	5			
AS Mo INSOL CMFDS	ACGIH	10			

NOTE: LIMITS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

VENTILATION: USE ADEQUATE VENTILATION.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE
VENTILATION.

EYE PROTECTION:

GENERALLY EYE CONTACT IS UNLIKELY WITH THIS TYPE MATERIAL. IF EYE CONTACT
IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS OR CHEMICAL TYPE GOGGLES SHOULD
BE WORN.

SKIN PROTECTION:
IF PROLONGED OR REPEATED SKIN CONTACT IS LIKELY, OIL IMPERVIOUS GLOVES
SHOULD BE WORN. GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

9. PHYSICAL AND CHEMICAL PROPERTIES

TYPICAL PHYSICAL PROPERTIES ARE GIVEN BELOW. CONSULT PRODUCT DATA SHEET FOR
SPECIFIC DETAILS.

ICE: GREASE
C. GRAY
ODOR: MILD
ODOR THRESHOLD-PPM: NE
pH: NA
BOILING POINT C (F): >316 (600)
DROP POINT C (F): 260 (500)
FLASH POINT C (F): >204 (400) (ESTIMATED FOR OIL, ASTM D-92 (COC))
FLAMMABILITY (SOLIDS): NE
AUTO FLAMMABILITY C (F): NA
EXPLOSIVE PROPERTIES: NA
OXIDIZING PROPERTIES: NA
VAPOR PRESSURE-MM HG 20 C: <0.1
VAPOR DENSITY: NE
EVAPORATION RATE: NE
RELATIVE DENSITY, 15/4 C: 0.92
SOLUBILITY IN WATER: NEGLIGIBLE
PARTITION COEFFICIENT: >3.5
VISCOSITY AT 40 C, CST: 320.0
VISCOSITY AT 100 C, CST: >16.0
POUR POINT C (F): NA
FREEZING POINT C (F): NE
VOLATILE ORGANIC COMPOUND: NE
NOTE: MOST PHYSICAL PROPERTIES FOR OIL COMPONENT.

DMSO EXTRACT, IP-346 (WT.%): <3, FOR MINERAL OIL ONLY

* APPLICABLE
ESTABLISHED
POSES

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): STABLE.
CONDITIONS TO AVOID: EXTREME HEAT AND HIGH ENERGY SOURCES OF IGNITION.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:
PRODUCT DOES NOT DECOMPOSE AT AMBIENT TEMPERATURES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

11. TOXICOLOGICAL DATA

ACUTE TOXICOLOGY:

ORAL TOXICITY (RATS):
PRACTICALLY NON-TOXIC (LD50: GREATER THAN 2000 MG/KG).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY (RABBITS):
PRACTICALLY NON-TOXIC (LD50: GREATER THAN 2000 MG/KG).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY (RATS):
PRACTICALLY NON-TOXIC (LC50: GREATER THAN 5 MG/L).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

EYE IRRITATION (RABBITS):
PRACTICALLY NON-IRRITATING. (DRAIZE SCORE: GREATER THAN 6 BUT 15 OR LESS).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION (RABBITS):
PRACTICALLY NON-IRRITATING. (PRIMARY IRRITATION INDEX: GREATER THAN 0.5 BUT
LESS THAN 3).
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

OTHER ACUTE TOXICITY DATA:
ALTHOUGH AN ACUTE INHALATION STUDY WAS NOT PERFORMED WITH THIS PRODUCT, A
VARIETY OF MINERAL OILS AND SYNTHETIC BASE OILS, SUCH AS THOSE IN THIS
PRODUCT HAVE BEEN TESTED. THESE SAMPLES HAD VIRTUALLY NO EFFECT OTHER THAN
A NONSPECIFIC INFLAMMATORY RESPONSE IN THE LUNG TO THE AEROSOLIZED MINERAL
OIL. THE PRESENCE OF ADDITIVES IN OTHER TESTED FORMULATIONS
APPROXIMATELY THE SAME AMOUNTS AS IN THE PRESENT FORMULATION DID NOT
AFFECT THE OBSERVED EFFECTS.

CHRONIC TOXICOLOGY (SUMMARY):
NO SIGNIFICANT ADVERSE EFFECTS WERE FOUND IN STUDIES USING REPEATED DERMAL
APPLICATIONS OF SIMILAR FORMULATIONS TO THE SKIN OF LABORATORY ANIMALS FOR
13 WEEKS AT DOSES SIGNIFICANTLY HIGHER THAN THOSE EXPECTED DURING NORMAL
INDUSTRIAL EXPOSURE. THE ANIMALS WERE EVALUATED EXTENSIVELY FOR EFFECTS OF
EXPOSURE (HEMATOLOGY, SERUM CHEMISTRY, URINALYSIS, ORGAN WEIGHTS,

MICROSCOPIC EXAMINATION OF TISSUES ETC.).

REPRODUCTIVE TOXICOLOGY (SUMMARY):
NO TERATOGENIC EFFECTS WOULD BE EXPECTED FROM DERMAL EXPOSURE, BASED ON
LABORATORY DEVELOPMENTAL TOXICITY STUDIES OF MAJOR COMPONENTS IN THIS
FORMULATION AND/OR MATERIALS OF SIMILAR COMPOSITION.

CHRONIC TOXICOLOGY (SUMMARY):
REPEATED AND/OR PROLONGED EXPOSURE MAY CAUSE IRRITATION TO THE SKIN, EYES
OR RESPIRATORY TRACT.
FOR MINERAL BASE OILS:
BASE OILS IN THIS PRODUCT ARE SEVERELY SOLVENT REFINED AND/OR SEVERELY
HYDROTREATED. CHRONIC MOUSE SKIN PAINTING STUDIES OF SEVERELY TREATED OILS
SHOWED NO EVIDENCE OF CARCINOGENIC EFFECTS. THESE RESULTS ARE CONFIRMED ON
A CONTINUING BASIS USING VARIOUS SCREENING METHODS SUCH AS MODIFIED AMES
TEST, IP-346, AND/OR OTHER ANALYTICAL METHODS.
FOR SYNTHETIC BASE OILS:
THE BASE OILS IN THIS PRODUCT HAVE BEEN TESTED IN THE AMES ASSAY AND OTHER
TESTS OF MUTAGENICITY WITH NEGATIVE RESULTS. THESE BASE OILS ARE NOT
EXPECTED TO BE CARCINOGENIC WITH CHRONIC DERMAL EXPOSURES.

SENSITIZATION (SUMMARY):
NOT EXPECTED TO BE SENSITIZING BASED ON TESTS OF THIS PRODUCT, COMPONENTS,
OR SIMILAR PRODUCTS.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS:
THIS PRODUCT IS EXPECTED TO BE INHERENTLY BIODEGRADABLE, AS THE PRINCIPAL
COMPONENTS HAVE BEEN SHOWN TO DEGRADE AT SLOW TO MODERATE RATES. THE
MAJOR COMPONENTS IN THE FORMULATION SHOW NO AQUATIC TOXICITY AT 1000 MG/L
LOADING, THEREFORE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT ARE
NOT EXPECTED.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:
PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED, CONTROLLED BURNER FOR FUEL
VALUE. SUCH BURNING MAY BE LIMITED PURSUANT TO THE RESOURCE CONSERVATION
AND RECOVERY ACT. IN ADDITION, THE PRODUCT IS SUITABLE FOR PROCESSING BY AN
APPROVED RECYCLING FACILITY OR CAN BE DISPOSED OF AT AN APPROPRIATE
GOVERNMENT WASTE DISPOSAL FACILITY. USE OF THESE METHODS IS SUBJECT TO USER
COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS AND CONSIDERATION OF
PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

RCRA INFORMATION:
THE UNUSED PRODUCT, IN OUR OPINION, IS NOT SPECIFICALLY LISTED BY THE EPA
AS A HAZARDOUS WASTE (40 CFR, PART 261D), NOR IS IT FORMULATED TO CONTAIN
MATERIALS WHICH ARE LISTED HAZARDOUS WASTES. IT DOES NOT EXHIBIT THE
HAZARDOUS CHARACTERISTICS OF IGNITABILITY, CORROSIVITY, OR REACTIVITY. THE
UNUSED PRODUCT IS NOT FORMULATED WITH SUBSTANCES COVERED BY THE TOXICITY
CHARACTERISTIC LEACHING PROCEDURE (TCLP). HOWEVER, USED PRODUCT MAY BE
REGULATED.

14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.

RID/ADR: NOT REGULATED BY RID/ADR.

IMO: NOT REGULATED BY IMO.

IATA: NOT REGULATED BY IATA.

15. REGULATORY INFORMATION

US OSHA HAZARD COMMUNICATION STANDARD:
WHEN USED FOR ITS INTENDED PURPOSES, THIS PRODUCT IS NOT CLASSIFIED AS
HAZARDOUS IN ACCORDANCE WITH OSHA 29 CFR 1910.1200.

EU LABELING:
PRODUCT IS NOT DANGEROUS AS DEFINED BY THE EUROPEAN UNION DANGEROUS
SUBSTANCES/PREPARATIONS DIRECTIVES. EU LABELING NOT REQUIRED.

GOVERNMENTAL INVENTORY STATUS:
PRODUCT IS NOT COMPLIANT WITH TSCA, EINECS/ELINCS, AICS, METI, AND DSL.

U.S. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III:
THIS PRODUCT CONTAINS NO "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312) REPORTABLE HAZARD CATEGORIES: NONE.

THIS PRODUCT CONTAINS THE FOLLOWING SARA (313) TOXIC RELEASE CHEMICALS:

CHEMICAL NAME	CAS NUMBER	CONC.
PHOSPHORODITHIOIC ACID, O,O-DI C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP)	68649-42-3	1.3%

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
LITHIUM HYDROXIDE MONOHYDRATE (0.06%)	1310-66-3	22
MOLYBDENUM (IV) SULFIDE	1317-33-5	1, 10, 18, 20, 21, 23
ZINC (ELEMENTAL ANALYSIS) (0.18%)	7440-66-6	22
LITHIUM-SOAP THICKENER (7.03%)	7620-77-1	22
ZINC DINONYLNAPHTHALENE SULFONATE (0.41%)	28016-00-4	22
PHOSPHORODITHIOIC ACID, O,O-DI C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP) (1.29%)	68649-42-3	18, 20, 21, 22, 24, 25
FATTY ACIDS, C16-22, LITHIUM SALTS (0.87%)	68783-36-8	22

REGULATORY LISTS SEARCHED:

1-ACGIH ALL
2-ACGIH A1

3=ACGIH A2
4=NTP CARC
5=NTP SUS
6=IARC 1
7=IARC 2A
8=IARC 2B
9=OSHA CARC
10=OSHA Z
11=OSHA 4
12=OSHA 5A2
13=OSHA 5E
14=OSHA 6
15=CA 12B
16=CA P65 CARC
17=CA P65 REPRO
18=CA RTK
19=FL RTK
20=IL RTK
21=LA RTK
22=MI 293
23=MN RTK
24=NJ RTK
25=PA RTK
26=RI RTK

CODE KEY:
CARC=CARCINOGEN
SUS=SUSPECTED CARCINOGEN
REPRO=REPRODUCTIVE

16. OTHER INFORMATION

USE: HEAVY DUTY TRUCK GREASE

NOTE:
PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES ARE NOT FORMULATED TO CONTAIN PCBs. HEALTH STUDIES HAVE SHOWN THAT MANY HYDROCARBONS POSE POTENTIAL HUMAN HEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON. INFORMATION PROVIDED ON THIS MSDS REFLECTS INTENDED USE. THIS PRODUCT SHOULD NOT BE USED FOR OTHER APPLICATIONS. IN ANY CASE, THE FOLLOWING ADVICE SHOULD BE CONSIDERED:

INDUSTRIAL LABEL:
UNDER NORMAL CONDITIONS OF INTENDED USE, THIS PRODUCT DOES NOT POSE A RISK TO HEALTH. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY IRRITATION. ALWAYS OBSERVE GOOD HYGIENE MEASURES.

FIRST AID:
WASH SKIN WITH SOAP AND WATER. FLUSH EYES WITH WATER. IF OVERCOME BY FUMES OR VAPOR, REMOVE TO FRESH AIR. IF INGESTED DO NOT INDUCE VOMITING. IF SYMPTOMS PERSIST SEEK MEDICAL ASSISTANCE. READ AND UNDERSTAND THE MSDS BEFORE USING THIS PRODUCT.

FOR INTERNAL USE ONLY:

MHC: 1* 1* 1* 1*
MPEEC: A
TRN: 530147-00
ELIS: 402858
CMCS97: 970641
REQ: US - MARKETING
S: L
REVAL DATE: 30OCT2001

REQUIRED INFORMATION IS GIVEN IN ACCORDANCE WITH APPLICABLE LAW. INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING ANY LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS. USE OR RETRANSMISSION OF THE INFORMATION CONTAINED HEREIN IN ANY OTHER FORMAT THAN THE FORMAT AS PRESENTED IS STRICTLY PROHIBITED. MOBIL NEITHER REPRESENTS NOR WARRANTS THAT THE FORMAT, CONTENT OR PRODUCT FORMULAS CONTAINED IN THIS DOCUMENT COMPLY WITH THE LAWS OF ANY OTHER COUNTRY EXCEPT THE UNITED STATES OF AMERICA.

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ITEM: 4F978 - Oil Air Compressor

PICK REQ: 1024516452

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A6695

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A6695
 A Ed Grainger Item: 4F978 - Oil Air Compressor

606202-00 MOBIL RARUS 427
 MATERIAL SAFETY DATA BULLETIN

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOBIL RARUS 427
 SUPPLIER:
 EXXONMOBIL CORPORATION
 3225 GALLOWAY RD.
 FAIRFAX, VA 22037
 24 - HOUR HEALTH AND SAFETY EMERGENCY (CALL COLLECT): 609-737-4411
 24 - HOUR TRANSPORTATION EMERGENCY:
 CHEMTREC:
 800-424-9300
 202-483-7616
 LUBES AND FUELS: 281-834-3296
 PRODUCT AND TECHNICAL INFORMATION:
 LUBRICANTS AND SPECIALTIES:
 800-662-4525
 800-443-9966
 FUELS PRODUCTS: 800-947-9147
 MSDS FAX ON DEMAND: 613-228-1467
 MSDS INTERNET WEBSITE: HTTP://EMSDS.IHSSOLUTIONS.COM/

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: PET. HYDROCARBONS AND ADDITIVES
 GLOBALLY REPORTABLE MSDS INGREDIENTS: NONE.
 SEE SECTION 8 FOR EXPOSURE LIMITS (IF APPLICABLE).

3. HAZARDS IDENTIFICATION

UNDER NORMAL CONDITIONS OF USE, THIS PRODUCT IS NOT CONSIDERED HAZARDOUS
 ACCORDING TO REGULATORY GUIDELINES (SEE SECTION 15).
 EMERGENCY OVERVIEW: AMBER LIQUID.
 DOT ERG NO.: NA
 POTENTIAL HEALTH EFFECTS:
 THIS MATERIAL IS NOT INTENDED FOR USE IN AIR COMPRESSORS FOR BREATHING
 APPLICATIONS. UNDER NORMAL CONDITIONS OF INTENDED USE, THIS PRODUCT DOES NOT
 POSE A RISK TO HEALTH. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN OR
 RESPIRATORY IRRITATION.
 FOR FURTHER HEALTH EFFECTS/TOXICOLOGICAL DATA, SEE SECTION 11.

4. FIRST AID MEASURES

EYE CONTACT:
 FLUSH THOROUGHLY WITH WATER. IF IRRITATION OCCURS, CALL A PHYSICIAN.
 SKIN CONTACT:
 WASH CONTACT AREAS WITH SOAP AND WATER. REMOVE AND CLEAN OIL SOAKED CLOTHING
 DAILY AND WASH AFFECTED AREA. (SEE SECTION 16 - INJECTION INJURY)
 INHALATION:
 REMOVE FROM FURTHER EXPOSURE. IF RESPIRATORY IRRITATION, DIZZINESS, NAUSEA,
 OR UNCONSCIOUSNESS OCCURS, SEEK IMMEDIATE MEDICAL ASSISTANCE. IF BREATHING
 HAS STOPPED, ASSIST VENTILATION WITH MECHANICAL DEVICE OR USE MOUTH-TO-MOUTH
 RESUSCITATION.
 INGESTION:
 NOT EXPECTED TO BE A PROBLEM. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.
 DO NOT INDUCE VOMITING.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.
 SPECIAL FIRE FIGHTING PROCEDURES:
 WATER OR FOAM MAY CAUSE FROTHING. USE WATER TO KEEP FIRE EXPOSED CONTAINERS
 COOL. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURE. PREVENT
 RUNOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS, SEWERS, OR
 DRINKING WATER SUPPLY.
 SPECIAL PROTECTIVE EQUIPMENT:
 FOR FIRES IN ENCLOSED AREAS, FIRE FIGHTERS MUST USE SELF-CONTAINED BREATHING
 APPARATUS.
 FIRE AND EXPLOSION HAZARDS: NONE.
 COMBUSTION PRODUCTS:
 SMOKE, CARBON MONOXIDE, SULFUR OXIDES, ALDEHYDES AND OTHER
 COMBUSTION PRODUCTS, IN THE CASE OF INCOMPLETE COMBUSTION.
 FLASH POINT C (F): >210 (410) (ASTM D-92).
 FLAMMABLE LIMITS (APPROX. % VOL. IN AIR) -

LEL: 0.9%
 UEL: 7.0%
 NFPA HAZARD ID:
 HEALTH: 0
 FLAMMABILITY: 1
 REACTIVITY: 0

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES:
 REPORT SPILLS/RELEASES AS REQUIRED TO APPROPRIATE AUTHORITIES. U.S. COAST
 GUARD AND EPA REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS/RELEASES
 THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT
 SPILL/RELEASE TO COAST GUARD NATIONAL RESPONSE CENTER TOLL FREE NUMBER
 (800) 424-8802. IN CASE OF ACCIDENT OR ROAD SPILL NOTIFY CHEMTREC
 (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

LAND SPILL:
 SHUT OFF SOURCE TAKING NORMAL SAFETY PRECAUTIONS. TAKE MEASURES TO MINIMIZE
 THE EFFECTS ON GROUND WATER. RECOVER BY PUMPING OR CONTAIN SPILLED MATERIAL
 WITH SAND OR OTHER SUITABLE ABSORBENT AND REMOVE MECHANICALLY INTO
 CONTAINERS. IF NECESSARY, DISPOSE OF ADSORBED RESIDUES AS DIRECTED IN
 SECTION 13.

WATER SPILL:
 CONFINE THE SPILL IMMEDIATELY WITH BOOMS. WARN OTHER SHIPS IN THE VICINITY.
 NOTIFY PORT AND OTHER RELEVANT AUTHORITIES. REMOVE FROM THE SURFACE BY
 SKIMMING OR WITH SUITABLE ABSORBENTS. IF PERMITTED BY REGULATORY AUTHORITIES
 THE USE OF SUITABLE DISPERSANTS SHOULD BE CONSIDERED WHERE RECOMMENDED IN
 LOCAL OIL SPILL PROCEDURES.

ENVIRONMENTAL PRECAUTIONS:
 PREVENT MATERIAL FROM ENTERING SEWERS, WATER SOURCES OR LOW LYING AREAS;
 ADVISE THE RELEVANT AUTHORITIES IF IT HAS, OR IF IT CONTAMINATES
 SOIL/VEGETATION.

PERSONAL PRECAUTIONS: SEE SECTION 8

7. HANDLING AND STORAGE

HANDLING:
 THIS MATERIAL IS NOT INTENDED FOR USE IN AIR COMPRESSORS FOR BREATHING
 APPLICATIONS. NO SPECIAL PRECAUTIONS ARE NECESSARY BEYOND NORMAL GOOD
 HYGIENE PRACTICES. SEE SECTION 8 FOR ADDITIONAL PERSONAL PROTECTION ADVICE
 WHEN HANDLING THIS PRODUCT.

STORAGE:
 KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT STORE IN OPEN OR UNLABELLED
 CONTAINERS. STORE AWAY FROM STRONG OXIDIZING AGENTS AND COMBUSTIBLE
 MATERIALS. DO NOT STORE NEAR HEAT, SPARKS, FLAME OR STRONG OXIDANTS.

SPECIAL PRECAUTIONS: PREVENT SMALL SPILLS AND LEAKAGES TO AVOID SLIP HAZARD.

EMPTY CONTAINER WARNING:
 EMPTY CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS.
 DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH
 CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF
 IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. DO NOT ATTEMPT TO
 REFILL OR CLEAN CONTAINER SINCE RESIDUE IS DIFFICULT TO REMOVE. EMPTY DRUMS
 SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY RETURNED TO A
 DRUM RECONDITIONER. ALL CONTAINERS SHOULD BE DISPOSED OF IN AN
 ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:
 WHEN MISTS/AEROSOLS CAN OCCUR, THE FOLLOWING ARE RECOMMENDED:
 5 MG/M3 (AS OIL MIST) - ACGIH THRESHOLD LIMIT VALUE (TLV)
 10 MG/M3 (AS OIL MIST) - ACGIH SHORT TERM EXPOSURE LIMIT (STEL)
 5 MG/M3 (AS OIL MIST) - OSHA PERMISSIBLE EXPOSURE LIMIT (PEL)

VENTILATION:
 IF MISTS ARE GENERATED, USE ADEQUATE VENTILATION, LOCAL EXHAUST OR
 ENCLOSURES TO CONTROL BELOW EXPOSURE LIMITS.

RESPIRATORY PROTECTION:
 IF MISTS ARE GENERATED, AND/OR WHEN VENTILATION IS NOT ADEQUATE, WEAR
 APPROVED RESPIRATOR.

EYE PROTECTION:
 IF EYE CONTACT IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS OR CHEMICAL TYPE
 GOGGLES SHOULD BE WORN.

SKIN PROTECTION:
 NOT NORMALLY REQUIRED. WHEN SPLASHING OR LIQUID CONTACT CAN OCCUR
 FREQUENTLY, WEAR OIL RESISTANT GLOVES AND/OR OTHER PROTECTIVE CLOTHING.
 GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

9. PHYSICAL AND CHEMICAL PROPERTIES

TYPICAL PHYSICAL PROPERTIES ARE GIVEN BELOW. CONSULT PRODUCT DATA SHEET
 FOR SPECIFIC DETAILS.

APPEARANCE: LIQUID

COLOR: AMBER

ODOR: MILD

ODOR THRESHOLD-PPM: NE

pH: NA

BOILING POINT C (F): >316 (600)

MELTING POINT C (F): NA

FLASH POINT C (F): >210 (410) (ASTM D-92)

FLAMMABILITY (SOLIDS): NE

AUTO FLAMMABILITY C (F): NA

E F PROPERTIES: NA

C G PROPERTIES: NA

VAPOR PRESSURE-MMHG 20 C: <0.1

VAPOR DENSITY: >2.0

EVAPORATION RATE: NE

RELATIVE DENSITY, 15/4 C: 0.879

SOLUBILITY IN WATER: NEGLIGIBLE

PARTITION COEFFICIENT: >3.5

VISCOSITY AT 40 C, CST: >90.0

VISCOSITY AT 100 C, CST: 11.6

POUR POINT C (F): < -9 (16)

FREEZING POINT C (F): NE

VOLATILE ORGANIC COMPOUND: NE

DMSO EXTRACT, IP-346 (WT.%): <3, FOR MINERAL OIL ONLY

NA=NOT APPLICABLE

NE=NOT ESTABLISHED

D=DECOMPOSES

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): STABLE.

CONDITIONS TO AVOID: EXTREME HEAT AND HIGH ENERGY SOURCES OF IGNITION.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

PRODUCT DOES NOT DECOMPOSE AT AMBIENT TEMPERATURES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

11. TOXICOLOGICAL DATA

TOXICOLOGY:

TOXICITY (RATS):

PRACTICALLY NON-TOXIC (LD50: GREATER THAN 2000 MG/KG).

BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY (RABBITS):

PRACTICALLY NON-TOXIC (LD50: GREATER THAN 2000 MG/KG).

BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY (RATS):

PRACTICALLY NON-TOXIC (LC50: GREATER THAN 5 MG/L).

BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

EYE IRRITATION (RABBITS):

PRACTICALLY NON-IRRITATING. (DRAIZE SCORE: GREATER THAN 6 BUT 15 OR LESS).

BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION (RABBITS):

PRACTICALLY NON-IRRITATING.

(PRIMARY IRRITATION INDEX: GREATER THAN 0.5 BUT LESS THAN 3).

BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

OTHER ACUTE TOXICITY DATA:

ALTHOUGH AN ACUTE INHALATION STUDY WAS NOT PERFORMED WITH THIS PRODUCT, A VARIETY OF MINERAL AND SYNTHETIC OILS, SUCH AS THOSE IN THIS PRODUCT, HAVE BEEN TESTED. THESE SAMPLES HAD VIRTUALLY NO EFFECT OTHER THAN A NONSPECIFIC INFLAMMATORY RESPONSE IN THE LUNG TO THE AEROSOLIZED MINERAL OIL. THE PRESENCE OF ADDITIVES IN OTHER TESTED FORMULATIONS (IN APPROXIMATELY THE SAME AMOUNTS AS IN THE PRESENT FORMULATION) DID NOT ALTER THE OBSERVED EFFECTS.

SUBCHRONIC TOXICOLOGY (SUMMARY):

NO SIGNIFICANT ADVERSE EFFECTS WERE FOUND IN STUDIES USING REPEATED DERMAL APPLICATIONS OF SIMILAR FORMULATIONS TO THE SKIN OF LABORATORY ANIMALS FOR 13 WEEKS AT DOSES SIGNIFICANTLY HIGHER THAN THOSE EXPECTED DURING NORMAL INDUSTRIAL EXPOSURE. THE ANIMALS WERE EVALUATED EXTENSIVELY FOR EFFECTS OF EXPOSURE (HEMATOLOGY, SERUM CHEMISTRY, URINALYSIS, ORGAN WEIGHTS, MICROSCOPIC EXAMINATION OF TISSUES ETC.).

REPRODUCTIVE TOXICOLOGY (SUMMARY):

NO TERATOGENIC EFFECTS WOULD BE EXPECTED FROM DERMAL EXPOSURE, BASED ON LABORATORY DEVELOPMENTAL TOXICITY STUDIES OF MAJOR COMPONENTS IN THIS FORMULATION AND/OR MATERIALS OF SIMILAR COMPOSITION.

CHRONIC TOXICOLOGY (SUMMARY):

REPEATED AND/OR PROLONGED EXPOSURE MAY CAUSE IRRITATION TO THE SKIN, EYES OR RESPIRATORY TRACT. OVEREXPOSURE TO OIL MIST MAY RESULT IN OIL DROPLET DEPOSITION AND/OR GRANULOMA FORMATION.

FOR MINERAL BASE OILS:

BASE OILS IN THIS PRODUCT ARE SEVERELY SOLVENT REFINED AND/OR SEVERELY TREATED. CHRONIC MOUSE SKIN PAINTING STUDIES OF SEVERELY TREATED OILS SHOW NO EVIDENCE OF CARCINOGENIC EFFECTS. THESE RESULTS ARE CONFIRMED ON A BASIS USING VARIOUS SCREENING METHODS SUCH AS MODIFIED AMES TEST, AND/OR OTHER ANALYTICAL METHODS.

FOR SYNTHETIC BASE OILS:

THE BASE OILS IN THIS PRODUCT HAVE BEEN TESTED IN THE AMES ASSAY AND OTHER TESTS OF MUTAGENICITY WITH NEGATIVE RESULTS. THESE BASE OILS ARE NOT EXPECTED TO BE CARCINOGENIC WITH CHRONIC DERMAL EXPOSURES.

SENSITIZATION (SUMMARY):

NOT EXPECTED TO BE SENSITIZING BASED ON TESTS OF THIS PRODUCT, COMPONENTS, OR SIMILAR PRODUCTS.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS:

IN THE ABSENCE OF SPECIFIC ENVIRONMENTAL DATA FOR THIS PRODUCT, THIS ASSESSMENT IS BASED ON INFORMATION FOR REPRESENTATIVE PRODUCTS.

ECOTOXICITY:

AVAILABLE ECOTOXICITY DATA (LL50 >1000 MG/L) INDICATES THAT ADVERSE EFFECTS TO AQUATIC ORGANISMS ARE NOT EXPECTED FROM THIS PRODUCT.

MOBILITY:

WHEN RELEASED INTO THE ENVIRONMENT, ADSORPTION TO SEDIMENT AND SOIL WILL BE THE PREDOMINANT BEHAVIOR.

PERSISTENCE AND DEGRADABILITY:

THIS PRODUCT IS EXPECTED TO BE INHERENTLY BIODEGRADABLE.

BIOACCUMULATIVE POTENTIAL:

BIOACCUMULATION IS UNLIKELY DUE TO THE VERY LOW WATER SOLUBILITY OF THIS PRODUCT, THEREFORE BIOAVAILABILITY TO AQUATIC ORGANISMS IS MINIMAL.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED, CONTROLLED BURNER FOR FUEL VALUE. SUCH BURNING MAY BE LIMITED PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT. IN ADDITION, THE PRODUCT IS SUITABLE FOR PROCESSING BY AN APPROVED RECYCLING FACILITY OR CAN BE DISPOSED OF AT AN APPROPRIATE GOVERNMENT WASTE DISPOSAL FACILITY. USE OF THESE METHODS IS SUBJECT TO USER COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS AND CONSIDERATION OF PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

RCRA INFORMATION:

THE UNUSED PRODUCT, IN OUR OPINION, IS NOT SPECIFICALLY LISTED BY THE EPA AS A HAZARDOUS WASTE (40 CFR, PART 261D), NOR IS IT FORMULATED TO CONTAIN MATERIALS WHICH ARE LISTED HAZARDOUS WASTES. IT DOES NOT EXHIBIT THE HAZARDOUS CHARACTERISTICS OF IGNITABILITY, CORROSIVITY, OR REACTIVITY. THE UNUSED PRODUCT IS NOT FORMULATED WITH SUBSTANCES COVERED BY THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP). HOWEVER, USED PRODUCT MAY BE REGULATED.

14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.

RID/ADR: NOT REGULATED BY RID/ADR.

IMO: NOT REGULATED BY IMO.

IATA: NOT REGULATED BY IATA.

STATIC ACCUMULATOR (50 PICOSIEMENS OR LESS): YES

15. REGULATORY INFORMATION

US OSHA HAZARD COMMUNICATION STANDARD:

WHEN USED FOR ITS INTENDED PURPOSES, THIS PRODUCT IS NOT CLASSIFIED AS HAZARDOUS IN ACCORDANCE WITH OSHA 29 CFR 1910.1200.

EU LABELING:

PRODUCT IS NOT DANGEROUS AS DEFINED BY THE EUROPEAN UNION DANGEROUS SUBSTANCES/PREPARATIONS DIRECTIVES. EU LABELING NOT REQUIRED.

GOVERNMENTAL INVENTORY STATUS:

ALL COMPONENTS COMPLY WITH TSCA, EINECS/ELINCS, AICS, DSL, AND KBCI.

U.S. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III: THIS PRODUCT CONTAINS NO "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312) REPORTABLE HAZARD CATEGORIES: NONE.

THIS PRODUCT CONTAINS NO CHEMICALS SUBJECT TO THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA (313) TOXIC RELEASE PROGRAM.

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME CAS NUMBER LIST CITATIONS

NO REPORTABLE INGREDIENTS

REGULATORY LISTS SEARCHED:

1=ACGIH ALL
2=ACGIH A1
3=ACGIH A2
4=NTP CARC
5=NTP SUS
6=IARC 1
7=IARC 2A
8=IARC 2B
9=OSHA CARC
10=OSHA Z
11=TSCA 4
12=TSCA 5A2
13=TSCA 5B
14=TSCA 6
15=TSCA 12B
16=CA P65 CARC
17=CA P65 REPRO
18=CA RTK
19=FL RTK
20=IL RTK
21=LA RTK
22=MI 293
23=MN RTK
24=NJ RTK
25=PA RTK
26=RI RTK

CODE KEY:

CARC=CARCINOGEN
SUS=SUSPECTED CARCINOGEN
REPRO=REPRODUCTIVE

16. OTHER INFORMATION

USE: COMPRESSOR OIL

NOTE:
PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES ARE NOT
FORMULATED TO CONTAIN PCBs.
STUDIES HAVE SHOWN THAT MANY HYDROCARBONS POSE POTENTIAL HUMAN HEALTH
RISKS WHICH MAY VARY FROM PERSON TO PERSON. INFORMATION PROVIDED ON THIS
LABEL IS INTENDED TO ASSIST IN THE PROPER USE OF THIS PRODUCT. FOR OTHER
APPLICATIONS. IN ANY CASE, THE FOLLOWING ADVICE SHOULD BE CONSIDERED:

INJECTION INJURY WARNING:
IF PRODUCT IS INJECTED INTO OR UNDER THE SKIN, OR INTO ANY PART OF THE BODY,
REGARDLESS OF THE APPEARANCE OF THE WOUND OR ITS SIZE, THE INDIVIDUAL SHOULD
BE EVALUATED IMMEDIATELY BY A PHYSICIAN AS A SURGICAL EMERGENCY. EVEN THOUGH
INITIAL SYMPTOMS FROM HIGH PRESSURE INJECTION MAY BE MINIMAL OR ABSENT,
EARLY SURGICAL TREATMENT WITHIN THE FIRST FEW HOURS MAY SIGNIFICANTLY REDUCE
THE ULTIMATE EXTENT OF INJURY.

INDUSTRIAL LABEL:
UNDER NORMAL CONDITIONS OF INTENDED USE, THIS PRODUCT DOES NOT POSE A RISK
TO HEALTH. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY
IRRITATION. ALWAYS OBSERVE GOOD HYGIENE MEASURES.

FIRST AID:
WASH SKIN WITH SOAP AND WATER. FLUSH EYES WITH WATER. IF OVERCOME BY FUMES
OR VAPOR, REMOVE TO FRESH AIR. IF INGESTED DO NOT INDUCE VOMITING. IF
SYMPTOMS PERSIST SEEK MEDICAL ASSISTANCE. READ AND UNDERSTAND THE MSDS
BEFORE USING THIS PRODUCT.

FOR INTERNAL USE ONLY:

MHC: 1* 1* 1* 1* 1*

MEPEC: A

TRN: 606202-00

ELIS: 400358

CMCS97: 970996

REQ: US - MARKETING

SAFE USE: L

EHS APPROVAL DATE: 21MAY2003

LEGALLY REQUIRED INFORMATION IS GIVEN IN ACCORDANCE WITH APPLICABLE
INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT
GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR
USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE
ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND
AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A
PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT.
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THE UNITED STATES OF AMERICA.

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ROBINAIRRobinair Way
Montpelier, OH 43543-0193Phone 419-485-5561
FAX 419-485-8300

Material Safety Data Sheet

Trade Name:

~~Premium (High) Vacuum Pump Oil~~
(13203, 13204)

Synonyms:

~~Lubricating Oil~~

Date: 12-4-92

CAS No.:
(Refer to Section 1)

64741-88-4

ROBINAIR INDEX NO: 113

PHONE NO. (For Info.)

(419) 485-5561

Chemtrec Emergency: (800) 424-9300

Material Hazard Evaluation

(Per OSHA Hazard Communication
Standard [29 CFR Part 1910.1200]) (OHCS)

Health: Non-Hazardous (OHCS).

Precautionary Statement: None.

HMIS Rating¹: Health 0 Flammability 1 Reactivity 0

1.0 Generic Composition / Components

Components

Refined Petroleum Oil(s)

CAS #~~64741-88-4~~**%**

100

Hazard Data

Oral LD50(rat): >15g/kg

Eye: Practically Non-Irritating

Skin: Practically Non-Irritating

Thin LC50/4H(rat): >5,000 mg/m³

¹ Hazard Rating: least - 0; slight - 1; moderate - 2; high - 3; extreme - 4
Robinair assignment based on our evaluation per NFPA and NPCA guidelines.

NA - Not Applicable

ND - No Data

NE - Not Established

2.0 Physical Data

Physical Hazard Classification (Per 29 CFR Part 1910.1200)

No	Combustible	No	Flammable	No	Pyrophoric
No	Compressed Gas	No	Organic Peroxide	No	Reactivity
No	Explosive	No	Oxidizer	Yes	Stable

Boiling Point, 760 mmHg, °C(°F): ~373(~703)
 Specific Gravity (60/60°F) (H₂O. = 1): 0.87
 Vapor Density (Air = 1): >1
 % Volatiles by Volume: Negligible
 Melting Point, °C(°F): NA
 Vapor Pressure, mmHg (25°C): ~4 × 10⁻⁵
 Solubility in H₂O., % by Weight: Negligible
 Evaporation Rate (Butyl Acetate = 1): <1
 pH of Undiluted Product: NA
 Appearance and Odor: Faint yellow or amber liquid, bland odor

3.0 Fire and Explosion Data

Flash Point, COC, °C(°F)	224(435)
Flash Point, PMC, °C(°F)	218(424)
Fire Point, COC, °C(°F)	252(485)
NFPA Rating ²	Health: 0 Flammability: 1 Reactivity: 0
Flammable Limits (% by volume in air)	Lower: NA Upper: NA
Extinguishing Media	CO ₂ , dry chemical, foam, water fog
Special Fire Fighting Procedure	None
Unusual Fire or Explosion Hazard	Water may cause frothing

4.0 Reactivity Data

Stability: Stable
 Conditions Contributing to Instability:
 Incompatibility: None
 Hazardous Decomposition Products: Strong oxidants, strong acids, and caustics
 (thermal, unless otherwise specified) CO₂, CO
 Conditions Contributing to Hazardous
 Polymerization: None

² Hazard Rating: least – 0; slight – 1; moderate – 2; high – 3; extreme – 4

Robinair assignment based on our evaluation per NFPA guidelines.

NA – Not Applicable

ND – No Data

NE – Not Established

5.0 Spill or Leak Procedures

Procedures if Material is Spilled:

- Remove sources of heat or ignition, provide adequate ventilation, contain leak.
- *Small Spills:* Absorb with suitable material such as rags, straw or sand.
- *Large Spills:* Contain spill in earthen dikes for later recovery.
- Report spills as required to appropriate authorities.

Waste Disposal:

- It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal.
- Check before disposing to be sure you are in compliance with all applicable laws and regulations.
- Chemtrec/RCRA Emergency Hotline Number: 800-424-9346.

Protective Measures During Repair and Maintenance of Contaminated Equipment:

- Refer to Section VII – Special Protection Information.
- Avoid prolonged contact with used oil.
- Wash exposed skin thoroughly with soap and water.

6.0 Health Hazard Data

Health Hazard Classification

(Per 29 CFR Part 1910.1200)

No	Carcinogen	No	Corrosive
No	Animal Carcinogen	No	Irritant
No	Suspect Carcinogen	No	Sensitizer
No	Mutagen	No	Teratogen
No	Highly Toxic	No	Target Organ
No	Toxic		

Product listed as Carcinogen or Potential Carcinogen by:

NTP No IARC No OSHA No Other No

Toxicity Summary: Practically non-toxic.

Major Route(s) of Entry: Inhalation of incidental mists or vapors.

Acute Exposure Symptoms

<i>Inhalation:</i>	Low risk at ambient temperatures. In enclosed spaces or when hot, vapors may reach concentrations sufficient to cause drowsiness, dizziness, headache, nausea, or lung irritation. Mists above TLV may cause chemical pneumonitis.
<i>Dermal Contact:</i>	Transient, slight irritation.
<i>Eye Contact:</i>	Practically non-irritant.
<i>Ingestion:</i>	Low toxicity. Very large amounts may cause generalized depression, headache, drowsiness, nausea, vomiting or diarrhea. Small doses may produce irritation and diarrhea.

Chronic Exposure

Prolonged and/or frequent contact may cause drying, cracking (dermatitis) or folliculitis. Repeated, excessive exposure to mists or fumes may induce pulmonary irritation or chronic bronchitis.

Other Special Effects

None expected.

Medical Conditions Aggravated by Exposure

None.

First Aid and Emergency Procedures for Acute Effect

<i>Inhalation:</i>	Remove to fresh air. Respiratory support, if necessary. Seek medical aid.
<i>Dermal:</i>	Wash with soap and water. Do not wear heavily contaminated clothing before laundering.
<i>Eyes:</i>	Flush with large volumes of water. Seek physician if any complications arise.
<i>Ingestion:</i>	Do not induce vomiting. Seek medical aid.
<i>Injection:</i>	Subcutaneous injection is a medical emergency. Seek medical aid immediately.

Notes to Physician: Following ingestion at a viscosity of around 200 SUS (100°F), there may be a minimal risk of aspiration into the lungs. For quantities above a few drops, careful cuffed tube lavage may still be considered. Aspirated material may cause chemical pneumonitis or lipoid pneumonia. Subcutaneous or intramuscular injection requires prompt surgical debridement. If not familiar with technique, seek skilled advice.

7.0 Special Protection Information

Ventilation Requirements: Use in well ventilated area. In confined space, mechanical ventilation may be required to keep levels of certain components below mandated standards as evaluated by designated personnel.

Permitted Threshold Air Concentrations:

Mineral Oil Mist	TLV-TWA	5mg/m ³	OSHA-PEL	5mg/m ³
	TLV-STEL	10mg/m ³	OSHA-STEL	ND
	TLV-Ceiling	ND	OSHA-Ceiling	ND
			OSHA-Peak	ND

Specific Personal Protective Equipment:

Respiratory:	Normally none required. If high vapor or mist concentrations expected, use respirator approved for organic vapors and mists.
Eyes:	Safety goggles, or chemical splash goggles if splashing is anticipated.
Dermal:	Oil impervious gloves if frequent or prolonged contact is expected.
Other Clothing or Equipment:	Wear body-covering work clothes to avoid prolonged or repeated exposure. Launder soiled work clothes before reuse.

8.0 Transportation and Special Precautions

Storage: Do not apply high heat or flame to container. Keep separate from strong oxidizing agents.

Caution: Empty containers may contain product residue which could include flammable or explosive vapors.

Consult appropriate Federal State and Local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

DOT Information

Proper Shipping Name:	Petroleum Lubricating Oil
Hazard Class:	Non-Hazardous
Hazard Identification Number:	None assigned
Placard:	None

9.0 Environmental Data

Product Name Premium High Vacuum Pump Oil
(13203, 13204)

SARA TITLE III

Section 313 – Toxic Chemicals

This product does not contain toxic chemicals of Section 313 of Title III of Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Components	CAS#	%
None		

Section 311 – Hazard Categories

<u>Yes</u> Not Applicable	<u>No</u> Fire Hazard
<u>No</u> Acute (Immediate Health Hazard)	<u>No</u> Sudden Release of Pressure Hazard
<u>No</u> Chronic (Delayed Health Hazard)	<u>No</u> Reactive Hazard

Section 302/(A) – Extremely Hazardous Substances

(RQ = Reportable Quantity)
(TPQ = Threshold Planning Quantity)

This product does not contain Extremely Hazardous Substances of Section 302/(A).

Component	CAS#	%	RQ lbs.	TPQ lbs.
None				

Clean Water Act

Under Section 311 (b) (4) of the Clean Water Act, discharges of crude oil and petroleum products in any kind or form to surface waters must be immediately reported to the National Response Center: 800-424-8802.

Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) – Section 102 Hazardous Substances

Component	CAS#	%	RQ lbs.
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Petroleum and petroleum fractions are excluded from the list of CERCLA hazardous substances by Section 101(14) of CERCLA.

New Jersey Worker & Community Right-to-Know Act

Petroleum Oil

Canada

WHMIS (Workplace Hazardous Material Information System)
("NC") Not Controlled

10.0 Labeling

NOTE

This product has been determined not to be a physical or a health hazard as defined by the OSHA Hazard Communication Standard.

ALL STATEMENTS, INFORMATION, AND DATA PROVIDED IN THIS MATERIAL SAFETY DATA SHEET ARE BELIEVED TO BE ACCURATE AND RELIABLE, BUT ARE PRESENTED WITHOUT GUARANTEE, REPRESENTATION, WARRANTY, OR RESPONSIBILITY OF ANY KIND, EXPRESSED OR IMPLIED. ANY AND ALL REPRESENTATIONS AND/OR WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY DISCLAIMED. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR THEIR PARTICULAR PURPOSE.

R.D. Clark

NAME

Safety & Environmental Administrator

TITLE



SIGNATURE

12-4-92

DATE

NA - Not Applicable

ND - No Data

NE - Not Established

ITEM: 4NA76 - Oil Multi Purpose 4 Oz

Zoom Spout Oil

PICK REQ: 1024516452

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A6365

This MSDS should be attached or kept with the respective product with which it is associated.

SAFETY DATA SHEET - A6365

1. Item: 4NA76 - Oil Multi Purpose 4 Oz

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ZOOM SPOUT OILER

REVISION #: 2.2

DATE PREPARED: MAY 22, 1991

DATE REVISED: APRIL 7, 2004

MANUFACTURER:
LA-CO INDUSTRIES, INC./MARKAL CO.
1201 PRATT BLVD.
ELK GROVE VILLAGE, IL 60007-5746
USA

INFORMATION TELEPHONE: 847-956-7600

EMERGENCY TELEPHONE: CALL CHEMTREC
USA: 800-424-9300

INTERNATIONAL (CALL COLLECT): 1-703-527-3887

CHEMICAL FORMULA: MIXTURE

CAS NO.: NOT APPLICABLE.

DERIVATION: NOT APPLICABLE.

SYNONYMS: NOT APPLICABLE.

GENERAL USE: GENERAL PURPOSE LUBRICATING OIL

SUPPLIER/IMPORTER:

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	%
OIL MIST	64742-65-0	100
OSHA TLV (TWA): 5 MG/M3		

SECTION 3 HAZARDS IDENTIFICATION

HAZARD OVERVIEW:

HARMFUL BY INHALATION AND IF SWALLOWED. MAY CAUSE LUNG DAMAGE IF SWALLOWED. IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. KEEP OUT OF REACH OF CHILDREN. KEEP AWAY FROM FOOD AND DRINK. DO NOT BREATHE VAPOR OR SPRAY. AVOID CONTACT WITH SKIN AND EYES. IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. DO NOT EMPTY INTO DRAINS. WEAR SUITABLE PROTECTIVE CLOTHING. IF SWALLOWED, DO NOT INDUCE VOMITING. SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER, LABEL OR SAFETY DATA SHEET.

POTENTIAL HEALTH EFFECTS:

PRIMARY EXPOSURE ROUTES: EYES, SKIN, INGESTION, INHALATION

ACUTE EFFECTS:

EYES:
MAY CAUSE EYE IRRITATION. DIRECT CONTACT MAY CAUSE BURNING, TEARING AND REDNESS.

SKIN:
MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY CAUSE REDNESS, BURNING AND DERMATITIS.

INGESTION: MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT.

INHALATION:
EXPOSURE TO MISTS, OR PROLONGED OR REPEATED EXPOSURE TO FUMES OR VAPORS THAT MAY BE GENERATED WHEN THIS MATERIAL IS HEATED, MAY CAUSE IRRITATION OF NOSE AND THROAT.

CHRONIC EFFECTS:
EYES: NOT DETERMINED.
SKIN: NOT DETERMINED.
INGESTION: NOT DETERMINED.
INHALATION: NOT DETERMINED.

CARCINOGENICITY: NOT APPLICABLE.

TARGET ORGANS EFFECTS: NOT APPLICABLE.

MEDICAL CONDITIONS AGGRAVATED BY LONG-TERM EXPOSURE: NOT DETERMINED.

OTHER INFORMATION: NOT APPLICABLE.

SECTION 4 FIRST AID

EYE CONTACT:
IF EYE CONTACT, FLUSH EYES WITH PLENTY OF CLEAN WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN.

SKIN CONTACT:
DO NOT USE GASOLINE, THINNERS OR SOLVENTS TO REMOVE PRODUCT FROM SKIN. WIPE PRODUCT FROM SKIN WITH ABSORBENT CLOTH OR PAPER AND REMOVE CONTAMINATED CLOTHING. CLEANSE AFFECTED AREAS THOROUGHLY BY WASHING WITH SOAP AND WATER AND, IF NECESSARY, A WATERLESS SKIN CLEANER. IF

IRRITATION OR REDNESS DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.

INGESTION:

IF VICTIM IS CONSCIOUS AND ALERT, GIVE 2 TO 3 CUPS OF MILK OR WATER TO DRINK. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEEK MEDICAL ATTENTION.

TO PHYSICIAN:

EMESIS OR LAVAGE IS NOT RECOMMENDED FOR INGESTION OF MINUTE QUANTITIES OR TASTES OF MOST HYDROCARBONS. MEDICAL OPINION IS DIVIDED FOR LARGER INGESTION. EMESIS OR LAVAGE HAS BEEN RECOMMENDED FOR THOSE PETROLEUM PRODUCTS WHICH HAVE A HIGH ORAL TOXICITY. GASTRIC LAVAGE WITH A CUFFED ENDOTRACHEAL TUBE IS RECOMMENDED BY SOME PHYSICIANS TO PREVENT ASPIRATION.

INHALATION:

IF IRRITATION OF NOSE OR THROAT DEVELOPS, MOVE AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING OR IF BREATHING DIFFICULTIES DEVELOP, ARTIFICIAL RESPIRATION OR OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

OTHER INFORMATION: NONE.

SECTION 5 FIRE FIGHTING MEASURES

FLASH POINT (METHOD): 388 DEG. F / 198 DEG. C (COC)

AUTOIGNITION TEMPERATURE: NOT DETERMINED.

LEL: NOT DETERMINED.

UEL: NOT DETERMINED.

FLAMMABILITY CLASSIFICATION: NFPA CLASS IIIB

EXTINGUISHING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE (CO2), WATER SPRAY, SAND OR EARTH. WATER AND FOAM MAY CAUSE FROTHING.

HAZARDOUS COMBUSTION PRODUCTS:

CARBON MONOXIDE, CARBON DIOXIDE, SMALLER AMOUNTS OF OXIDES OF SULFUR AND NITROGEN.

UNUSUAL FIRE OR EXPLOSION HAZARDS: NONE KNOWN.

FIRE-FIGHTING INSTRUCTIONS/EQUIPMENT:

KEEP PERSONNEL REMOVED AND UPWIND OF ANY FIRE. WEAR FULL FIRE-FIGHTING TURN-OUT GEAR (FULL BUNKER GEAR), AND RESPIRATORY PROTECTION (SCBA). WATER SPRAY MAY BE USEFUL IN MINIMIZING VAPORS AND COOLING CONTAINERS EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES. MOVE UNDAMAGED CONTAINERS FROM FIRE AREA IF POSSIBLE WITHOUT RISK.

SECTION 6 ACCIDENTAL RELEASE MEASURES

USE RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). COLLECT LEAKING LIQUID IN SEALABLE CONTAINERS. ABSORB SPILLED LIQUID IN SAND OR INERT ABSORBENT. CONTACT FIRE AUTHORITIES AND APPROPRIATE REGULATORY AGENCIES. IF SPILL OF ANY AMOUNT IS MADE INTO OR UPON U.S. NAVIGABLE WATERS, THE CONTIGUOUS ZONE, OR ADJOINING SHORELINES, NOTIFY COAST GUARD NATIONAL RESPONSE CENTER (800-424-8802).

SECTION 7 HANDLING AND STORAGE

HANDLING PRECAUTIONS:

USE RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). WASH THOROUGHLY AFTER HANDLING.

STORAGE REQUIREMENTS:

STORE AWAY FROM INCOMPATIBLE CHEMICALS (SEE SEC. 10). STORE IN A COOL, DRY AREA.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE/FACE PROTECTION:

USE APPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT.

SKIN/HAND PROTECTION: USE IMPERMEABLE GLOVES, SUCH AS RUBBER GLOVES.

RESPIRATORY PROTECTION:

IF AIRBORNE CONCENTRATION EXCEEDS RECOMMENDED EXPOSURE LIMITS, A SUITABLE FILTER-TYPE RESPIRATOR SHOULD BE WORN.

OTHER EQUIPMENT: EYE WASH AND SAFETY SHOWER.

ENGINEERING CONTROLS:

NORMAL ROOM VENTILATION. LOCAL EXHAUST IN CONFINED AREAS.

ADMINISTRATIVE CONTROLS:

USERS OF THIS PRODUCT MUST BE PROPERLY TRAINED AND QUALIFIED IN ITS USE.

OTHER INFORMATION:

IT IS SUGGESTED THAT A SOURCE OF CLEAN WATER BE AVAILABLE IN THE WORK AREA FOR FLUSHING EYES AND SKIN. BARRIER CREAMS THAT ARE SPECIFIC FOR OIL-BASED MATERIALS ARE RECOMMENDED WHEN GLOVES ARE IMPRACTICAL.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: CLEAR YELLOW LIQUID.

ODOR: OIL-LIKE.

ODOR THRESHOLD (PPM): NOT DETERMINED.

SPECIFIC GRAVITY (H2O = 1): 0.88

SOLUBILITY:

WATER: INSOLUBLE
FAT: SOLUBLE.

COEFFICIENT OF WATER/OIL SOLUBILITY: <<1

PARTITION COEFFICIENT (n-OCTANOL/WATER): >>1

pH: NOT APPLICABLE.

MELTING POINT: NOT DETERMINED.

BOILING POINT: ABOVE 600 DEG. F / 316 DEG. C

VAPOR PRESSURE (MMHg AT 20 DEG. C): NOT DETERMINED.

VAPOR DENSITY (AIR = 1): >1

EVAPORATION RATE (n-BuAc = 1): <1

V.O.C.: 0% (W/W), 0% (V/V), 0 LBS./GAL. (U.S.), 0 KG/L

FLASH POINT (METHOD): (SEE SECTION 5)

AUTOIGNITION TEMPERATURE: (SEE SECTION 5)

FLAMMABILITY CLASSIFICATION: (SEE SECTION 5)

UNUSUAL FIRE OR EXPLOSION HAZARDS: (SEE SECTION 5)

OXIDIZING PROPERTIES: NOT APPLICABLE.

OTHER INFORMATION: NONE.

SECTION 10 STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NONE KNOWN.

CHEMICALS TO AVOID: STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS (NON-THERMAL): NOT DETERMINED.

SECTION 11 TOXICOLOGICAL INFORMATION

SENSITIZATION TO PRODUCT: NOT APPLICABLE.

IRRITANCY OF PRODUCT: EYE AND SKIN CONTACT, INHALATION, INGESTION.

REPRODUCTIVE TOXICITY: NOT APPLICABLE.

TERATOGENICITY: NOT APPLICABLE.

MUTAGENICITY: NOT APPLICABLE.

FURTHER HAZARD INFORMATION, IF APPLICABLE, MAY BE FOUND IN SECTION 3.
TOXICOLOGICAL INFORMATION REGARDING INDIVIDUAL INGREDIENTS, IF APPLICABLE,
FOUND IN SECTION 2.

SECTION 12 ECOLOGICAL INFORMATION

MOBILITY: NOT DETERMINED.

DEGRADABILITY: NOT DETERMINED.

ACCUMULATION: NOT DETERMINED.

ECOTOXICITY: NOT DETERMINED.

OTHER ADVERSE EFFECTS: NOT DETERMINED.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

SECTION 14 TRANSPORT INFORMATION

D.O.T. (U.S.):

PROPER SHIPPING NAME: NOT REGULATED.

HAZARD CLASS OR DIVISION: NOT REGULATED.

HAZARD LABEL: NOT REGULATED.

I.D. NUMBER: NOT REGULATED.

TDG (CANADA): NOT REGULATED.

IATA: NOT REGULATED.

ICAO: NOT REGULATED.

IMO: NOT REGULATED.

AUSTRALIAN CODE FOR THE TRANSPORT OF DANGEROUS GOODS:
DANGEROUS GOODS CLASS AND SUBSIDIARY RISK: NOT DETERMINED.

SECTION 15 REGULATORY INFORMATION

FOOTNOTES FOR SECTION 2:

(1) SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 313.

(2) APPEARS ON THE CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT
(55) SUBSTANCES LIST.

(3) APPEARS ON THE MASSACHUSETTS SUBSTANCES LIST.

(4) APPEARS ON THE NEW JERSEY RIGHT-TO-KNOW HAZARDOUS SUBSTANCES LIST.

(5) APPEARS ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST.

(6) APPEARS ON THE CANADIAN WHMIS INGREDIENT DISCLOSURE LIST.

U.S.A.:

OSHA HAZARD STATUS:

THIS PRODUCT IS CONSIDERED TO BE HAZARDOUS AS DEFINED BY THE U.S. OSHA HCS
(29 CFR 1910.1200).

EPA SARA SEC. 311/312 HAZARD CATEGORIES:

IMMEDIATE (ACUTE) HEALTH HAZARD.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

ALL INGREDIENTS CONTAINED IN THIS PRODUCT ARE LISTED ON THE U.S. EPA TSCA
CHEMICAL SUBSTANCE INVENTORY.

HMIS RATING:

HEALTH 1
FLAMMABILITY 1
REACTIVITY 0

NFPA RATING:

HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

CANADA:

WHMIS STATUS:

THIS PRODUCT IS CONSIDERED TO BE HAZARDOUS AS DEFINED BY CANADIAN WHMIS
CONTROLLED PRODUCTS REGULATIONS.

WHMIS RATING: D1-B

WHMIS RISK PHRASES:

HARMFUL BY INHALATION AND IF SWALLOWED. MAY CAUSE LUNG DAMAGE IF
SWALLOWED. IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

WHMIS PRECAUTIONARY STATEMENTS:

KEEP OUT OF REACH OF CHILDREN. KEEP AWAY FROM FOOD AND DRINK. DO NOT
BREATHE VAPOR OR SPRAY. AVOID CONTACT WITH SKIN AND EYES. IN CASE OF
CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK
MEDICAL ADVICE. DO NOT EMPTY INTO DRAINS. WEAR SUITABLE PROTECTIVE
CLOTHING. IF SWALLOWED, DO NOT INDUCE VOMITING.
SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER, LABEL OR SAFETY
DATA SHEET.

DOMESTIC SUBSTANCES LIST (DSL):

ALL INGREDIENTS CONTAINED IN THIS PRODUCT ARE LISTED ON THE CANADIAN EPA
(CEPA) DOMESTIC SUBSTANCES LIST (DSL).

E.U.:

EUROPEAN INVENTORY OF EXISTING CHEMICAL SUBSTANCES (EINECS):

ALL INGREDIENTS CONTAINED IN THIS PRODUCT ARE LISTED ON THE EUROPEAN
INVENTORY OF EXISTING CHEMICAL SUBSTANCES (EINECS).

CATEGORIES OF DANGER (LABELING INFORMATION): HARMFUL (Xn), IRRITANT (Xi)

RISK (R) PHRASES: HARMFUL BY INHALATION AND IF SWALLOWED (R20/22).

HARMFUL:

MAY CAUSE LUNG DAMAGE IF SWALLOWED (R65). IRRITATING TO EYES, RESPIRATORY
SYSTEM AND SKIN (R36/37/38).

SAFETY(S) PHRASES:

KEEP OUT OF REACH OF CHILDREN (S2)
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS (S13)
DO NOT BREATHE VAPOR OR SPRAY (S23)
AVOID CONTACT WITH SKIN AND EYES (S24/25)
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND
SEEK MEDICAL ADVICE (S26)
DO NOT EMPTY INTO DRAINS (S29)
WEAR SUITABLE PROTECTIVE CLOTHING (S36)
IF SWALLOWED, SEEK MEDICAL ADVICE AND SHOW THIS CONTAINER, LABEL OR SAFETY
DATA SHEET (S46)
IF SWALLOWED, DO NOT INDUCE VOMITING:
SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER, LABEL OR SAFETY
DATA SHEET (S62).

AUSTRALIA:

WORKSAFE AUSTRALIA STATUS:

THIS PRODUCT IS CLASSIFIED AS HAZARDOUS ACCORDING TO CRITERIA OF WORKSAFE
AUSTRALIA.

HAZCHEM CODE: NOT DETERMINED.

POISONS SCHEDULE NUMBER: NOT DETERMINED.

FURTHER REGULATORY INFORMATION REGARDING INDIVIDUAL INGREDIENTS, IF
APPLICABLE, MAY BE FOUND IN SECTION 2.

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA
OF THE U.S. OSHA HAZARD COMMUNICATION STANDARD, THE CANADIAN WHMIS
CONTROLLED PRODUCTS REGULATIONS, THE BRITISH CIP2 REGULATION 6, AND THE
AUSTRALIAN NMRCHS. THIS MSDS CONTAINS THE INFORMATION REQUIRED BY THE
ABOVE REGULATIONS AND CONFORMS TO ANSI Z400.1-1993.

SECTION 16 OTHER INFORMATION

MSDS PREPARED BY: DIRECTOR OF CHEMICAL SAFETY

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS
ACCURATE AND RELIABLE TO THE BEST OF OUR KNOWLEDGE AND BELIEF. HOWEVER,
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3. Caulking